480 VOLT ROOF TOP UNIT SCHEDULE HALE HIGH SCHOOL RFP 2022

MARK	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (TONS)	HEATING CAPACITY INPUT (MBH)	CFM	TOTAL E.S.P. (IWG)	ELECTRICAL DATA				WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	H.P.	M.C.A.	M.O.P.			
RTU-210,215,220,221,222,224,226,301,302,303,304,306,307,308,309,310,312,313,318,323	LENNOX	LGM036U4E	3	65/53	1200	0.8	460/3/60	1-1/2	11	15	965	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-108,115,202,205,206,229,230,231	LENNOX	LGM036U4E	3	65/53	1200	1.0	460/3/60	1-1/2	11	15	965	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-100,104,107,116,117,126	LENNOX	LGM036U4E	3	65/53	1200	1.3	460/3/60	1-1/2	11	15	965	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-211,212,213,233,300,305,314,315,316,317,319,320,321	LENNOX	LGM048U4E	4	108/81	1600	0.8	460/3/60	1-3/4	13	15	1000	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-227	LENNOX	LGM048U4E	4	108/81	1600	1.0	460/3/60	1-3/4	13	15	1000	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-103,120,122	LENNOX	LGM048U4E	4	108/81	1600	1.3	460/3/60	1-3/4	13	15	1000	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-214,223,225,311,322	LENNOX	LGM060U4E	5	108/81	2000	0.8	460/3/60	1-3/4	14	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-110,232	LENNOX	LGM060U4E	5	108/81	2000	1.0	460/3/60	1-3/4	14	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-102	LENNOX	LGM060U4E	5	108/81	2000	1.3	460/3/60	1-3/4	14	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-207,208,216,217,324	LENNOX	LGM074U4E	6	150/113	2400	0.8	460/3/60	1-3/4	15	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-109,112,113,114,200,201,204	LENNOX	LGM074U4E	6	150/113	2400	1.0	460/3/60	1-3/4	15	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-106,121	LENNOX	LGM074U4E	6	150/113	2400	1.3	460/3/60	1-3/4	15	20	1035	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-209,218	LENNOX	LGM092U4E	7.5	180/117	3000	0.8	460/3/60	3-3/4	19	20	1445	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-203,228,237	LENNOX	LGM092U4E	7.5	180/117	3000	1.0	460/3/60	3-3/4	19	20	1445	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-101,105,123,238	LENNOX	LGM092U4E	7.5	180/117	3000	1.3	460/3/60	3-3/4	19	20	1445	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-219	LENNOX	LGM102U4E	8.5	180/117	3400	1.0	460/3/60	3-3/4	21	25	1450	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-118,119	LENNOX	LGM120U4E	10	240/156	4000	1.5	460/3/60	3-3/4	24	30	1485	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R,T
RTU-124	LENNOX	LGM120U4E	10	240/156	4000	1.3	460/3/60	3-3/4	24	30	1485	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-325,326	LENNOX	LGM150U4E	12.5	240/156	5000	0.8	460/3/60	3-3/4	26	30	1490	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-257	LENNOX	LGM180U4M	15	360/234	6000	1.0	460/3/60	5	38	45	2705	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-001	LENNOX	LGM180U4M	15	360/234	6000	1.3	460/3/60	5	38	45	2705	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-256	LENNOX	LGM210U4M	17.5	480/312	7000	1.8	460/3/60	7.5	47	50	2825	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-125	LENNOX	LGM240U4M	20	480/312	8000	1.3	460/3/60	7.5	49	50	3025	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R
RTU-004	LENNOX	LGM180U4M	15	360/234	6000	1.3	460/3/60	5	38	45	2705	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,O,P,R

NOTES:
1. REFER TO PROJECT MANUAL SPECIFICATIONS FOR ADDITIONAL FEATURES, REQUIREMENTS, AND SEQUENCE OF OPERATION.
2. R410A REFRIGERANT.
3. INTERLOCK OUTDOOR AIR DAMPER WITH CO_2 SENSOR FOR PROVISIONAL DEMAND CONTROL VENTILATION.
4. INTERLOCK UNIT OPERATION WITH BUILDING MANAGEMENT SYSTEM FOR EMERGENCY SHUT DOWN. REFER TO PLANS FOR EMERGENCY SHUT DOWN SWITCH.
5. CONTROL DEVICES SHALL BE CAPABLE OF 2 STAGES OF COOLING AND UP TO TWO STAGES OF HEATING. REFER TO HEATING CAPACITIES LISTED ABOVE FOR UNITS WITH TWO STAGE HEATING.

ACCESSORIES:
A. FACTORY 24" ROOF CURB TO MATCH SPECIFIED UNIT. CONTRACTOR TO PROVIDE INSULATION IN BOTTOM OF CURB.
B. LOW AMBIENT KIT (COOLING AVAILABLE DOWN TO 0°F.)
C. CONCENTRIC DIFFUSER.
D. DIRTY FILTER SWITCH.
E. FACTORY OR FIELD SUPPLIED HAIL GUARD.
F. FIRELITE ADDRESSABLE SMOKE DETECTOR, WITH ADDRESSABLE RELAY MODULE AND SAMPLING TUBE.
G. TIME DELAY.
H. COMFORTSENSE 8500 SENSOR WITH CO2.
I. BAPI MODEL BA/CO-B4 CARBON MONOXIDE SENSOR.
J. ECONOMIZER WITH DUAL ENTHALPY CONTROL AND POWERED EXHAUST.
K. CONDENSATE OVERFLOW SENSOR.
L. SUPCO MODEL SLP0530 PRESSURE SENSOR.
M. TIE DOWN CLIPS
N. 2" MERV 13 FILTER.
O. HUMIDITROL (HOT GAS REHEAT FOR DEHUMIDIFICATION).
P. STAINLESS STEEL HEAT EXCHANGER
R. OUTSIDE AIR MOTORIZED DAMPER INTERLOCKED WITH CO2 SENSOR. DAMPER TO BE CONTROLLED VIA ROOF TOP UNIT CONTROLLER LOGIC FOR PROPORTIONAL DEMAND CONTROL VENTILATION. (DAMPER SHALL GO TO FULL CLOSED POSITION WHEN INDOOR FAN SHUTS DOWN).
S. CURB ADAPTER
T. SIDE DISCHARGE

MECHANICAL SYMBOL LEGEND

	SUPPLY DIFFUSER, 4-WAY THROW	—CH—	CHILLED WATER SUPPLY PIPING
	RETURN GRILLE	—CR—	CHILLED WATER RETURN PIPING
	EXHAUST GRILLE OR FAN	—H—	HEATING WATER SUPPLY PIPING
	SIDEWALL AIR DEVICE	—HR—	HEATING WATER RETURN PIPING
	RUNOUT BALANCE DAMPER	(T)	THERMOSTAT
	MANUAL DAMPER	(S)	SENSOR
	OPPOSED BLADE DAMPER, MOTORIZED	(H)	HUMIDISTAT
	FLEX DUCT RUNOUT	F	FIRE DAMPER
	DUCT TRANSITION (ONE LINE)	S	SMOKE DAMPER
▽	DOOR UNDERCUT	F S	COMBINATION FIRE/SMOKE DAMPER

PRELIMINARY – NOT FOR CONSTRUCTION:
THESE DRAWINGS AND DOCUMENTS COMPRISE INFORMATION FOR THE DESCRIPTION OF THE SCOPE OF WORK IN SUPPORT OF THE ISSUED REQUEST FOR PROPOSAL. THESE DOCUMENTS ARE NOT TO BE USED FOR CONSTRUCTION. AS REQUIRED IN THE REQUEST FOR PROPOSAL, CONSTRUCTION DOCUMENTS BY LICENSED ENGINEER MUST BE PROVIDED AS PART OF THE RFP SCOPE OF WORK.

UTILITIES NOTE:
CONTRACTORS SHALL DIRECT ALL WORK WITH ALL UTILITY COMPANIES THROUGH TPS PROJECT MANAGER. CONTRACTORS SHALL NOT CONTACT UTILITY COMPANIES DIRECTLY WITHOUT PRIOR APPROVAL OF OWNER.

480 VOLT REPLACEMENT ROOF TOP UNIT SCHEDULE HALE HIGH SCHOOL RFP 2022

MARK	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (TONS)	HEATING CAPACITY INPUT (MBH)	CFM	TOTAL E.S.P. (IWG)	ELECTRICAL DATA				WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	H.P.	M.C.A.	M.O.P.			
RTU-241	LENNOX	LGM036U4E	3	65/53	1200	0.8	460/3/60	1-1/2	11	15	965	1,2,3,4,5	A,B,D,E,G,H,I,K,L,M,N,O,P,R
RTU-003	LENNOX	LGM060U4E	5	108/81	2000	1.3	460/3/60	1-3/4	14	20	1035	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-243	LENNOX	LGM092U4E	7.5	180/117	3000	0.8	460/3/60	3-3/4	19	20	1445	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-242,244	LENNOX	LGM102U4E	8.5	180/117	3400	0.8	460/3/60	3-3/4	21	25	1450	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-246,250,251	LENNOX	LGM120U4E	10	240/156	4000	0.8	460/3/60	3-3/4	24	30	1485	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-245,248,249	LENNOX	LGM150U4E	12.5	240/156	5000	0.8	460/3/60	3-3/4	26	30	1490	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-002,111	LENNOX	LGM150U4E	12.5	240/156	5000	1.3	460/3/60	3-3/4	26	30	1490	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-239,240,247	LENNOX	LGM156U4M	13	360/234	5200	0.8	460/3/60	3	31	35	2695	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-234	LENNOX	LGM156U4M	13	360/234	5200	1.3	460/3/60	3	31	35	2695	1,2,3,4,5	B,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-252,253,254,255	LENNOX	LGH300H4M	25	480/312	10000	1.0	460/3/60	7.5	61	70	3025	1,2,3,4,5	B,C,D,E,F,G,H,I,K,L,M,N,O,P,R,S
RTU-235,236	LENNOX	LGH420H4M	35	800/528	14000	1.3	460/3/60	15	102	110	7760	1,2,3,4,5	A,B,D,E,F,G,H,I,K,L,M,N,P,R,T

NOTES:
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2. R410A REFRIGERANT.
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S. CURB ADAPTER
T. SIDE DISCHARGE

H.V.A.C. GENERAL DEMOLITION NOTES:

A. ALL CUTTING AND PATCHING SHALL BE DONE IN COMPLIANCE WITH ARCHITECT'S DIRECTIVE AS TO METHOD AND PROCEDURES.

B. THE CONTRACTOR SHALL SCHEDULE WORK WITH THE OWNER'S REPRESENTATIVE. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED AND SPACES CLEANED AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL MAKE PROVISIONS FOR PLASTIC SHEETING TO CONTROL CONSTRUCTION DUST WITHIN AREA OF CONSTRUCTION.

C. MECHANICAL UNITS SERVING AREA OF CONSTRUCTION SHALL BE "OFF" DURING WORK TO PREVENT CONSTRUCTION DUST FROM BEING DISTRIBUTED TO OTHER AREAS OF THE BUILDING. WHERE UNITS MUST CONTINUE TO OPERATE, RETURN AIR FROM AREA OF DEMOLITION SHALL BE FILTERED AT DUCT INLET. FILTERS SHALL BE CHANGED WHEN HOLDING CAPACITY IS REACHED.

D. ALL REMOVED HVAC EQUIPMENT SHALL BE RETURNED TO THE OWNER STORAGE LOCATION AS DIRECTED. CARE SHALL BE TAKEN IN THE REMOVAL OF EQUIPMENT TO MAINTAIN SALVAGE VALUE. WHERE EQUIPMENT IS FOUND TO BE DAMAGED OR BEYOND SERVICEABLE CONDITION, THE CONTRACTOR SHALL IDENTIFY EQUIPMENT TO THE OWNER FOR OBSERVATION PRIOR TO REMOVAL.

E. WHERE EXISTING ACTIVE SYSTEMS ARE FOUND TO BE DETERIORATED AND REQUIRING REPLACEMENT, PROVIDE A WRITTEN REPORT TO THE OWNER IDENTIFYING WORK REQUIRED. INCLUDE A PROPOSAL FOR PERFORMING THE WORK WITH COSTS AND SCHEDULE TO COMPLETION. DO NOT PROCEED WITH REPAIR WORK UNTIL THE OWNER HAS PROVIDED A WRITTEN DIRECTIVE ACCEPTING THE SUBMITTED PROPOSAL.

F. ABANDONED DUCTWORK AND PIPING SYSTEMS TO BE REMOVED THROUGHOUT AREA OF REMODEL. THIS INCLUDES SYSTEMS INVOLVED WITH THIS REMODEL WORK AND PREVIOUSLY ABANDONED AND MODIFIED SYSTEMS.

H.V.A.C. GENERAL NOTES:

A. WORK SHOWN ON THE DRAWINGS IS TO BE COORDINATED WITH WORK OF ALL OTHER TRADES AND ACTUAL CONDITIONS OF CONSTRUCTION.

B. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH CODE REQUIREMENTS AND MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, ADHERING TO REQUIRED CLEARANCES FOR OPERATION AND SERVICING.

C. ELECTRICAL REQUIREMENTS OF FURNISHED AND INSTALLED DIVISION 23 EQUIPMENT AND SYSTEM COMPONENTS SHALL BE PROVIDED IN WRITING BY THE DIVISION 23 CONTRACTOR TO THE DIVISION 26 CONTRACTOR FOR INCLUSION AND COORDINATION OF DIVISION 26 WORK.

D. PROVIDE FLEXIBLE DUCT CONNECTION TO EXHAUST FANS, SUPPLY FANS, ROOF TOP UNITS, FAN COIL UNITS, FURNACES, AIR HANDLING EQUIPMENT, ETC.

E. DUCTWORK CONSTRUCTION AND INSTALLATION SHALL BE PER MOST RECENT SMACNA STANDARDS FOR PRESSURE AND DUCT DIMENSION OF SYSTEM INSTALLATION. ALL DUCT JOINTS SHALL BE SEALED AS NOTED IN THE SPECIFICATIONS.

2825 1,2,3,4,5,6 A,B,C,F,G,I,K,L,N,O,P,R,S,T
3025 1,2,3,4,5,6 A,B,C,F,G,I,K,L,N,O,P,R,S,T

F. DUCT SIZES SHOWN ON DRAWING ARE INSIDE CLEAR.

G. MAKE TRANSITION FROM DUCTWORK SIZES SHOWN ON THE DRAWINGS TO EQUIPMENT DUCT CONNECTION SIZES. VERIFY EQUIPMENT CONNECTION SIZES WITH FACTORY CERTIFIED DRAWINGS. MAKE ALL TRANSITIONS PER MOST RECENT SMACNA STANDARDS.

H. ALL MAJOR BRANCH DUCTS SHALL BE CONSTRUCTED USING OPPOSED BLADE DAMPERS WITH LOCKING DEVICE OR WITH SPLITTER DAMPER WITH LOCKING DEVICE FOR BALANCE OF DUCT SYSTEM.

I. TURNING VANES SHALL BE INSTALLED IN ALL RECTANGULAR 90 DEGREE ELBOWS IN SUPPLY, RETURN AND EXHAUST DUCTWORK, AND AS INDICATED ON THE DRAWINGS.

J. USE MINIMUM LENGTH FLEXIBLE DUCT TO AIR DEVICES, (MAXIMUM 5 FT.). USE FLEX DUCT ONLY IN FULLY ACCESSIBLE CEILING SPACES. PROVIDE 90 DEGREE SHEET METAL ELBOW AT CEILING DIFFUSER NECK CONNECTION. PROVIDE SADDLE UNDER FLEXIBLE DUCT HANGER TO SUPPORT DUCT AND PREVENT "PINCHING" OF DUCTWORK. FLEXIBLE DUCT SHALL BE INSTALLED SO AS NOT TO REDUCE CROSS SECTION AREA OF DUCT.

K. WHERE DUCT RUNOUTS FROM SECTIONS OF MAIN DUCTWORK TO DIFFUSERS ARE UNEQUAL IN EQUIVALENT LENGTH AND RESULT IN SIGNIFICANT DIFFERENCES IN PRESSURE DROP WHICH REQUIRE PINCHING TAKEOFF DAMPER OR DAMPER AT GRILLE FACE, ADDITIONAL FLEXIBLE DUCT AND/OR ADDITIONAL CHANGES IN DIRECTION SHALL BE INSTALLED IN RUNOUT DUCT WITH LEAST PRESSURE DROP TO BRING DUCTS TO EQUIVALENT PRESSURE LOSSES.

L. WHERE DUCT TAKE-OFFS TO GRILLES ARE NEAR THE UNIT AND RESULT IN PRESSURE DROPS SIGNIFICANTLY LESS THAN THE FURTHERMOST DIFFUSER BRANCH, THE RUNOUT DUCT SIZE TO THE GRILLE SHALL BE REDUCED FROM THE SCHEDULED RUNOUT SIZE TO INCREASE THE PRESSURE DROP AND PREVENT THE NEED TO "PINCH" THE DAMPER AT THE TAKE-OFF AND/OR GRILLE FACE.

M. THE CONTRACTOR SHALL COORDINATE ROUTING AND SIZE OF DUCTWORK WITH ACTUAL FINAL BUILDING CONDITIONS OF STRUCTURE SIZE AND LOCATION, LIGHT LOCATIONS, ARCHITECTURAL FEATURES, AND WORK OF OTHER TRADES. WHERE DUCT SIZES MUST BE REVISED FROM THOSE SHOWN ON THE DRAWINGS, MAINTAIN SAME CROSS SECTIONAL AREA, VELOCITY, AND PRESSURE DROP. WHEN NECESSARY, REROUTE DUCT TO CLEAR OBSTRUCTIONS WITH MINIMUM NUMBER OF FITTINGS AND ELEVATION CHANGES. WHERE DUCT MUST BE SIGNIFICANTLY ALTERED FROM THAT SHOWN ON THE DRAWINGS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING.

N. EXPOSED DUCTWORK AND ACCESSORIES IN FINISHED AREAS TO BE PAINTED AS DIRECTED BY ARCHITECT.

O. DIVISION 23 CONTRACTOR SHALL PROVIDE TEST AND BALANCE OF HVAC SYSTEMS. TEST AND BALANCE SHALL BE PERFORMED AND REPORTED AS DESCRIBED BY NEBB OR AABC. FILTERS SHALL BE NEW AND CLEAN, DUCTWORK CLEAN, AND EQUIPMENT CONTROLS AND DEVICES FULLY FUNCTIONAL AT THE TIME OF PERFORMING BALANCE WORK.

P. MAINTAIN MINIMUM 10'-0" CLEAR BETWEEN ANY FLUE, VENT OR TOILET EXHAUST AND OUTSIDE AIR INTAKES. WHERE HORIZONTAL DISTANCE CANNOT BE PROVIDED, EXTEND FLUE VENTS 3'-0" ABOVE OUTSIDE AIR INTAKE.

Q. SMOKE DETECTORS SHALL BE REQUIRED IN ALL HVAC UNITS WITH 2000 CFM AND GREATER CAPACITY. SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23. DIVISION 23 WORK SHALL COORDINATE WITH DIVISION 26 CONTRACTOR. INSTALL DETECTORS IN RETURN AIR. PROVIDE REMOTE INDICATOR AND TEST STATION WHERE UNITS ARE NOT READILY VISIBLE FOR INSPECTION.

R. INSTALL ALL MOTOR DRIVEN EQUIPMENT WITH VIBRATION ISOLATORS AND OR PADS TO REDUCE NOISE TRANSFER. TYPE AND METHOD OF ISOLATION SHALL BE IN CONFORMANCE WITH THOSE DESCRIBED IN THE SPECIFICATIONS FOR THE DUTY, TYPE, AND APPLICATION OF THE EQUIPMENT.

S. ALL EQUIPMENT SHALL BE PERMANENTLY LABELED WITH SIGNAGE SECURED TO EQUIPMENT.

T. CONDENSATE PIPING SHALL BE AS NOTED ON THE DRAWING, BUT IN NO CASE LESS THAN 3/4 INCHES.

U. ROUTE CONDENSATE PIPING TO APPROVED DISCHARGE LOCATION. PROVIDE CONDENSATE TRAP WITH CLEANOUTS AND VENT ON DISCHARGE SIDE OF TRAP FOR ALL UNITS WITH COOLING COILS. TRAP DEPTH SHALL BE A MINIMUM OF THE UNIT TOTAL PRESSURE PLUS 2 INCHES.

V. SUPPORT CONDENSATE PIPING ABOVE ROOF AS RECOMMENDED BY ROOFING MANUFACTURER TO MAINTAIN ROOF WARRANTY. SPACE SUPPORTS SAME AS NOTED FOR PIPE HANGERS.

W. CONDENSATE PIPING INSTALLED WITHIN THE BUILDING SHALL BE FULLY INSULATED AND PROVIDED WITH VAPOR BARRIER.

X. FIRE DAMPERS SHALL BE MINIMUM 98% FREE AREA DYNAMIC TYPE. PROVIDE FIRE DAMPERS IN ALL DUCT PENETRATIONS TO FIRE RATED ASSEMBLIES. PROVIDE ACCESS DOORS IN DUCTWORK AND FIRE RATED ASSEMBLIES FOR OBSERVATION AND MAINTENANCE OF DAMPERS. REFER ARCHITECTURAL DRAWINGS FOR LOCATION, RATING, AND ASSEMBLY DEFINITION OF FIRE RATED WALL, CEILING, AND FLOOR ASSEMBLIES.

Y. REFER TO ARCHITECTURAL DRAWINGS AND DIVISION 1 SPECIFICATIONS FOR DESCRIPTION OF ALTERNATES.

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL-ELECTRICAL-PLUMBING-CONSULTANTS
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CA 3479 EXP. 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
10/6/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

MECHANICAL GENERAL NOTES AND SCHEDULES

DATE: 10.06.2022

SHEET NO.

M001

MINI SPLIT SYSTEM OUTDOOR UNIT SCHEDULE (NOT DONE)

MARK (OUTDOOR UNIT)	UNITS SERVED	MANUFACTURER	MODEL NO.	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SEER (EER)	ELECTRICAL DATA			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE	MCA	MOCP			
HPU-1	FCU-1A,1B,1C	LENNOX	MLA036S4M	35.6	36.2	19.7	208/1/60	35	50	255	1,2,3,4	A,B,C,E,F
HPU-2	FCU-2A,2B	LENNOX	MLA018S4M	19.0	20.0	21.5	208/1/60	25	35	160	1,2,3,4	A,B,C,E,F
HPU-3	FCU-3A,3B,3C,3D	LENNOX	MLA036S4M	35.6	36.2	19.7	208/1/60	35	50	255	1,2,3,4	A,B,C,E,F
HPU-4	FCU-4A,4B	LENNOX	MLA018S4M	19.0	20.0	21.5	208/1/60	25	35	160	1,2,3,4	A,B,C,E,F
HPU-5	FCU-5A,5B,5C	LENNOX	MLA036S4M	35.6	36.2	19.7	208/1/60	35	50	255	1,2,3,4	A,B,C,E,F
HPU-6	FCU-6A,6B	LENNOX	MLA018S4M	19.0	20.0	21.5	208/1/60	25	35	160	1,2,3,4	A,B,C,E,F
HPU-7	FCU-7A,7B	LENNOX	MLA018S4M	19.0	20.0	21.5	208/1/60	25	35	160	1,2,3,4	A,B,C,E,F
HPU-8	FCU-8A,8B,8C,8D	LENNOX	MLA036S4M	35.6	36.2	19.7	208/1/60	35	50	255	1,2,3,4	A,B,C,E,F
HPU-9	FCU-9	LENNOX	MLA090S4B	9.0	10.0	19.5	208/1/60	9	15	90	1,2,3,4	A,B,C
HPU-10	FCU-10	LENNOX	MLA090S4S	9.0	10.9	24.0	208/1/60	9	15	90	1,2,3,4	A,B,C
HPU-11	FCU-11	LENNOX	MLA090S4S	9.0	10.9	24.0	208/1/60	9	15	90	1,2,3,4	A,B,C
HPU-12	FCU-12A,12B	LENNOX	MLA090S4S	9.0	10.9	24.0	208/1/60	9	15	90	1,2,3,4	A,B,C
HPU-13	FC-13	LENNOX	MLA090S4S	9.0	10.9	19.5	208/1/60	9	15	90	1,2,3,4	A,B,C

NOTES:
1. COOLING CAPACITIES ARE BASED ON UNIT CFM SUPPLY AIR AND 80°F, EDB/67°F, EWB, WITH 95°F AIR ENTERING CONDENSER. EER IS BASED ON ARI CONDITIONS.
2. REFER TO PROJECT MANUAL SPECIFICATIONS FOR ADDITIONAL FEATURES AND REQUIREMENTS.
3. HEATING CAPACITIES ARE BASED ON 47°F O.A., 70°F EAT AT INDOOR FCU.
4. INTERLOCK OPERATION WITH INDOOR FCU'S, INDOOR UNIT POWERED BY OUTDOOR HEAT PUMP UNIT.

ACCESSORIES:
A. HAIL GUARDS.
B. R410A REFRIGERANT.
C. REDI-CHARGED REFRIGERANT PIPING.

MINI SPLIT SYSTEM FAN COIL UNIT SCHEDULE (NOT DONE)

MARK (INDOOR UNIT)	SERVED FROM	MANUFACTURER	MODEL NO.	CFM	NOMINAL COOLING (MBH)	NOMINAL HEATING (MBH)	ELECTRICAL		WT. (LBS.)	NOTES	ACCESSORIES
							VOLTAGE	RLA			
FC-1A,1B,1C	HPU-1	LENNOX	M22A012S4	380	11.0	13.0	208/1/60	1.0	36	1,2,3,4,5	A,B,C,D,E,F
FC-2A,2B	HPU-2	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-3A,3B,3C,3D	HPU-3	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-4A,4B	HPU-4	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-5A,5B,5C	HPU-5	LENNOX	M22A012S4	380	11.0	13.0	208/1/60	1.0	36	1,2,3,4,5	A,B,C,D,E,F
FC-6A,6B	HPU-6	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-7A,7B	HPU-7	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-8A,8B,8C,8D	HPU-8	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-9	HPU-9	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-10	HPU-10	LENNOX	MWM009S4	370	9.0	12.0	208/1/60	0.2	26	1,2,3,4,5	A,B,C,D,E,F
FC-11	HPU-11	LENNOX	MWM009S4	370	9.0	12.0	208/1/60	0.2	26	1,2,3,4,5	A,B,C,D,E,F
FC-12A,12B	HPU-12	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F
FC-13	HPU-13	LENNOX	M22A009S4	300	9.0	12.0	208/1/60	0.9	32	1,2,3,4,6	A,B,C,D,E,F

NOTES:
1. COOLING CAPACITY LISTED BASED ON 95°F O.A., 80°F DB/67°F WB EAT.
2. R410A REFRIGERANT.
3. POWERED FROM OUTDOOR HEAT PUMP.
4. HEATING CAPACITY LISTED BASED ON 47°F O.A., 70° EAT.
5. FAN CFM LISTED IS FOR WET COIL ON HI SETTING.
6. FAN CFM LISTED IS FOR WET COIL ON MEDIUM SETTING.
7. FAN CFM LISTED IS FOR WET COIL ON LOW SETTING.
8. INTERLOCK FAN COIL UNIT WITH BUILDING MANAGEMENT SYSTEM FOR EMERGENCY SHUT DOWN.

ACCESSORIES:
A. FILTERS. (CLEANABLE)
B. ELECTRONIC EXPANSION VALVE.
C. INTERLOCK OPERATION WITH OUTDOOR HEAT PUMP UNIT.
D. HARD WIRED, WALL-MOUNTED REMOTE CONTROLLER.
E. CONDENSATE PUMP.
F. SUPCO MODEL SLP2565 PRESSURE SENSOR LOCATED AT INDOOR UNIT.

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10/6/2022

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TULSA, OK 74129

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

MECHANICAL GENERAL NOTES AND SCHEDULES

DATE: 10.06.2022

SHEET NO.

M002

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. NO NEW WORK IN AEROBICS ROOM.

2. INSTALL GROUND MOUNTED HORIZONTAL DISCHARGE UNIT ON REINFORCED CONCRETE PAD. PAD SHALL EXTEND A MINIMUM OF 4 INCHES ABOVE FINISHED GRADE. INSTALL 6' BLACK VINYL FENCE ON PAD. PROVIDE MINIMUM 36 INCH LOCKABLE GATE.

3. INSTALL EXTERIOR DUCTWORK FROM UNIT INTO BUILDING. ALL EXTERIOR DUCTWORK SHALL BE DOUBLE WALL DUCTWORK. INSIDE AND OUTSIDE LAYERS OF DUCT SHALL HAVE SNAP LOCK SEAMS. INSIDE DUCT SHALL BE FORMED TO FOLD OVER DUCT INSULATION AND CONNECT TO DUCT MATE FLANG THAT IS ATTACHED TO OUTER DUCT. INSULATION BETWEEN DUCTS SHALL BE 2 INCH 3 POUND DNESIDY DUCT LINER. ALL EXTERIOR DUCT TO BE CONSTRUCTED PER LATEST SMACNA'S STANDARD.

4. ALL DUCT PENETRATIONS THROUGH SIDE WALL SHALL BE FLASHED AND COUNTER FLASHED. INSTALL DRIP LEDGE EXTENDING A MINIMUM OF 6" IN ALL DIRECTIONS OF PENETRATIONS.

5. PROVIDE SUPPORTS FOR ALL EXTERIOR DUCTWORK. SUPPORTS SHALL BE "H" FRAME ANGLE IRON.

6. RISE UP INSIDE FACE OF WALL TO STRUCTURE.

7. INSTALL TIGHT TO STRUCTURE.

8. DROP DOWN WALL TO CLASSROOM.

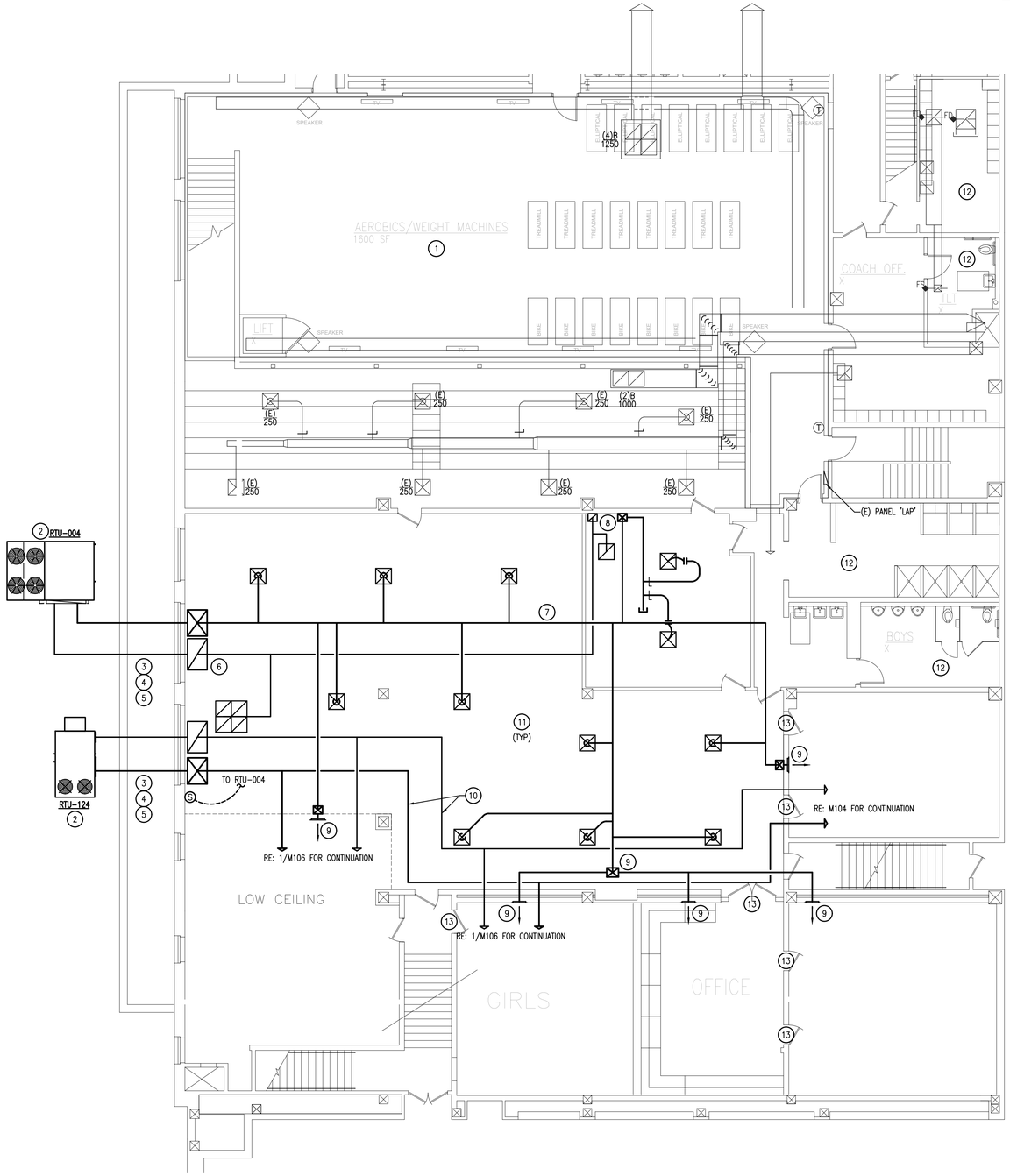
9. DROP DOWN WALL AND INSTALL WALL GRILLE INTO SPACE.

10. INSTALL DUCTWORK TIGHT TO CEILING STRUCTURE.

11. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

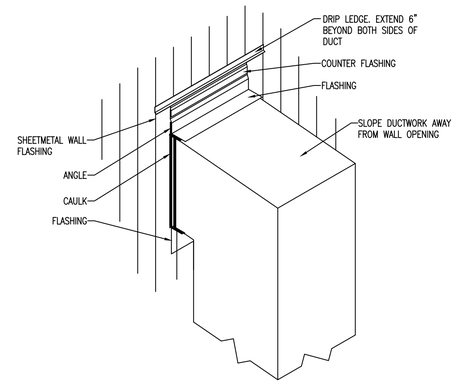
12. EXISTING TOILET EXHAUST AND HEATING SYSTEMS TO REMAIN INTACT DURING CONSTRUCTION.

13. UNDERCUT DOOR MINIMUM 1 INCH.



1 GROUND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH



2 SIDEWALL DUCT PENETRATION DETAIL
SCALE: NTS

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AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

GROUND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M101

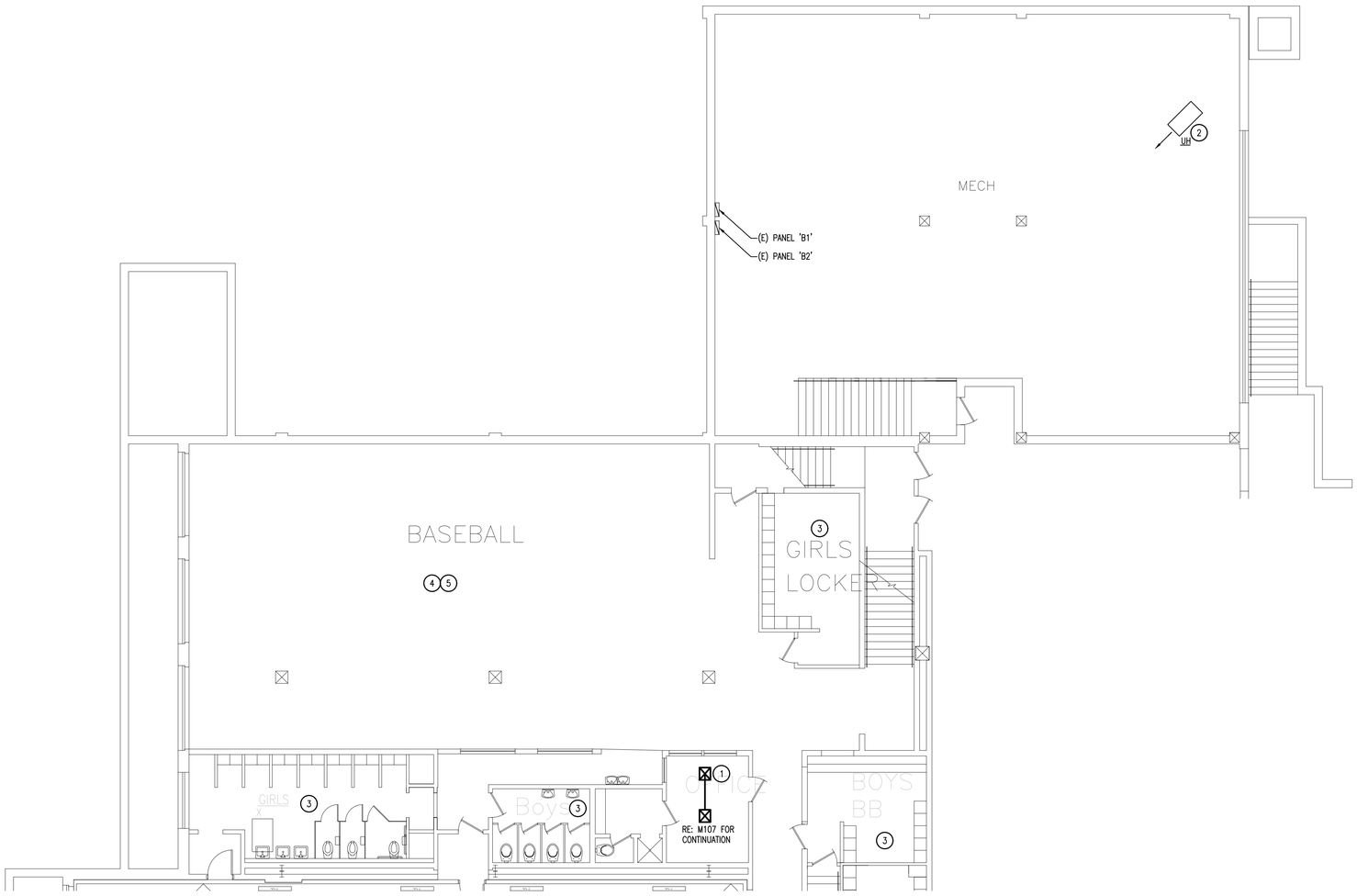
GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. DUCTWORK UP TO MEZZANINE. RE: 1/M107 FOR CONTINUATION
2. INSTALL GAS FIRED UNIT HEATER IN BOILER ROOM.
3. EXISTING TOILET HEATING AND EXHAUST SYSTEMS TO REMAIN INTACT THROUGHOUT CONSTRUCTION.
4. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)
5. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.



1 GROUND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

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PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

GROUND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M102

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF MOUNTED RTU. COORDINATE FINAL LOCATION OF DUCT SHAFT WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

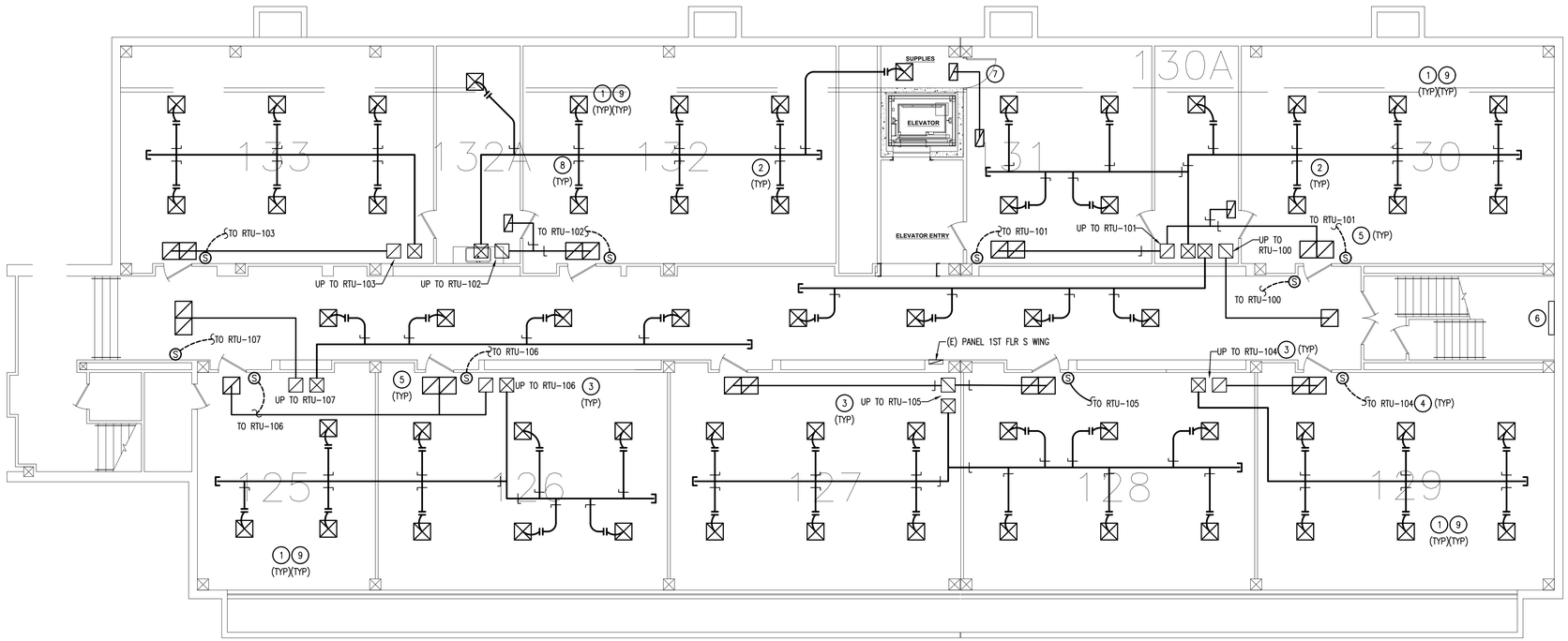
5. INSTALL CONTROLS IN ALL CLASSROOMS SERVED BY ONE RTU.

6. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

7. TRANSFER GRILLES WITH LINED DUCTWORK.

8. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR TO REINSTALL ALL EXISTING FIRE PROTECTION HEADS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.



1 FIRST LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

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AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

FIRST LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

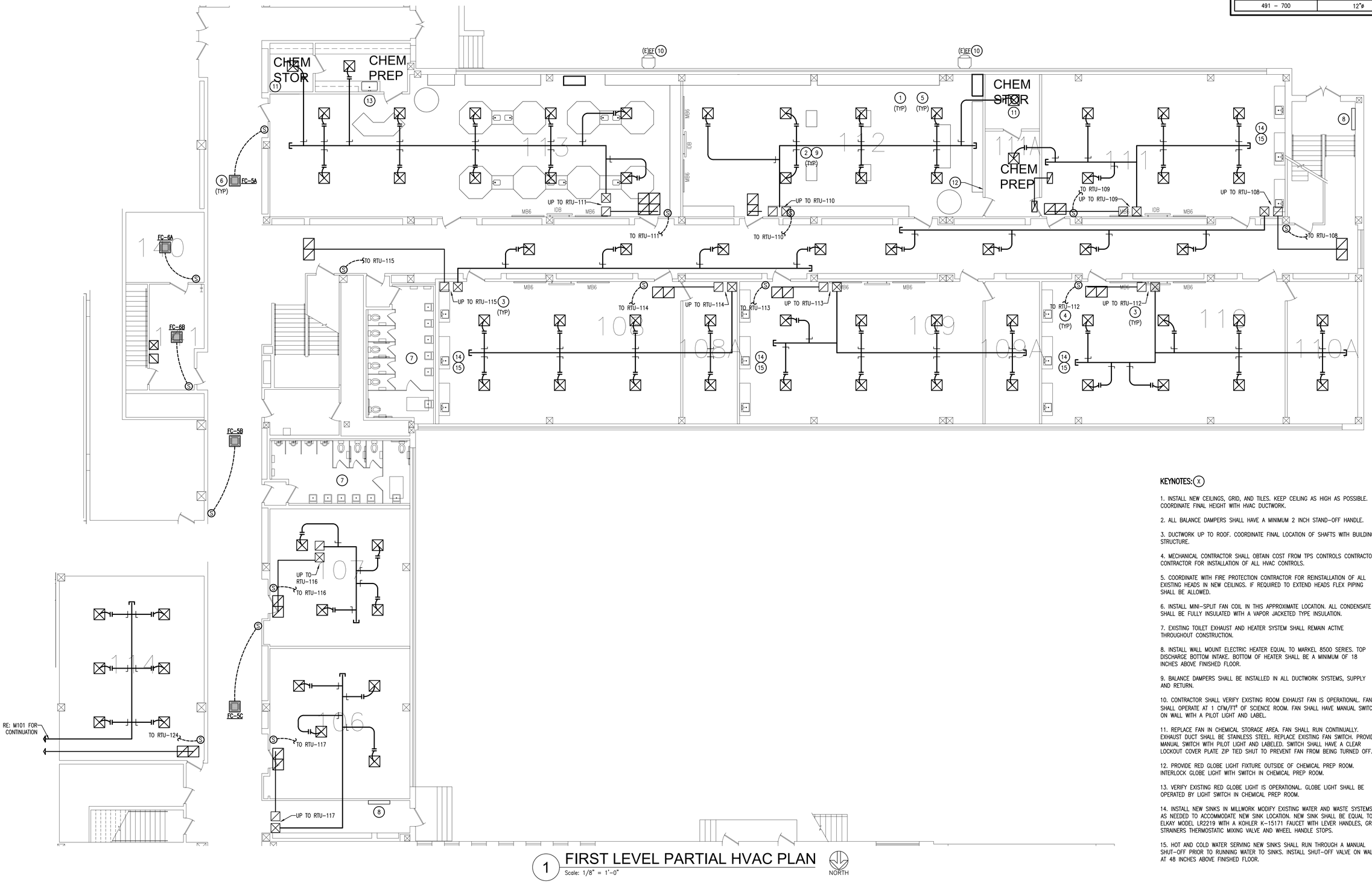
SHEET NO.

M103

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø



KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK.

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

6. INSTALL MINI-SPLIT FAN COIL IN THIS APPROXIMATE LOCATION. ALL CONDENSATE SHALL BE FULLY INSULATED WITH A VAPOR JACKETED TYPE INSULATION.

7. EXISTING TOILET EXHAUST AND HEATER SYSTEM SHALL REMAIN ACTIVE THROUGHOUT CONSTRUCTION.

8. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

9. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

10. CONTRACTOR SHALL VERIFY EXISTING ROOM EXHAUST FAN IS OPERATIONAL. FAN SHALL OPERATE AT 1 CFM/FT² OF SCIENCE ROOM. FAN SHALL HAVE MANUAL SWITCH ON WALL WITH A PILOT LIGHT AND LABEL.

11. REPLACE FAN IN CHEMICAL STORAGE AREA. FAN SHALL RUN CONTINUALLY. EXHAUST DUCT SHALL BE STAINLESS STEEL. REPLACE EXISTING FAN SWITCH. PROVIDE MANUAL SWITCH WITH PILOT LIGHT AND LABELED. SWITCH SHALL HAVE A CLEAR LOCKOUT COVER PLATE ZIP TIED SHUT TO PREVENT FAN FROM BEING TURNED OFF.

12. PROVIDE RED GLOBE LIGHT FIXTURE OUTSIDE OF CHEMICAL PREP ROOM. INTERLOCK GLOBE LIGHT WITH SWITCH IN CHEMICAL PREP ROOM.

13. VERIFY EXISTING RED GLOBE LIGHT IS OPERATIONAL. GLOBE LIGHT SHALL BE OPERATED BY LIGHT SWITCH IN CHEMICAL PREP ROOM.

14. INSTALL NEW SINKS IN MILLWORK MODIFY EXISTING WATER AND WASTE SYSTEMS AS NEEDED TO ACCOMMODATE NEW SINK LOCATION. NEW SINK SHALL BE EQUAL TO ELKAY MODEL LR2219 WITH A KOHLER K-15171 FAUCET WITH LEVER HANDLES, GRID STRAINERS THERMOSTATIC MIXING VALVE AND WHEEL HANDLE STOPS.

15. HOT AND COLD WATER SERVING NEW SINKS SHALL RUN THROUGH A MANUAL SHUT-OFF PRIOR TO RUNNING WATER TO SINKS. INSTALL SHUT-OFF VALVE ON WALL AT 48 INCHES ABOVE FINISHED FLOOR.

1 FIRST LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

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AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

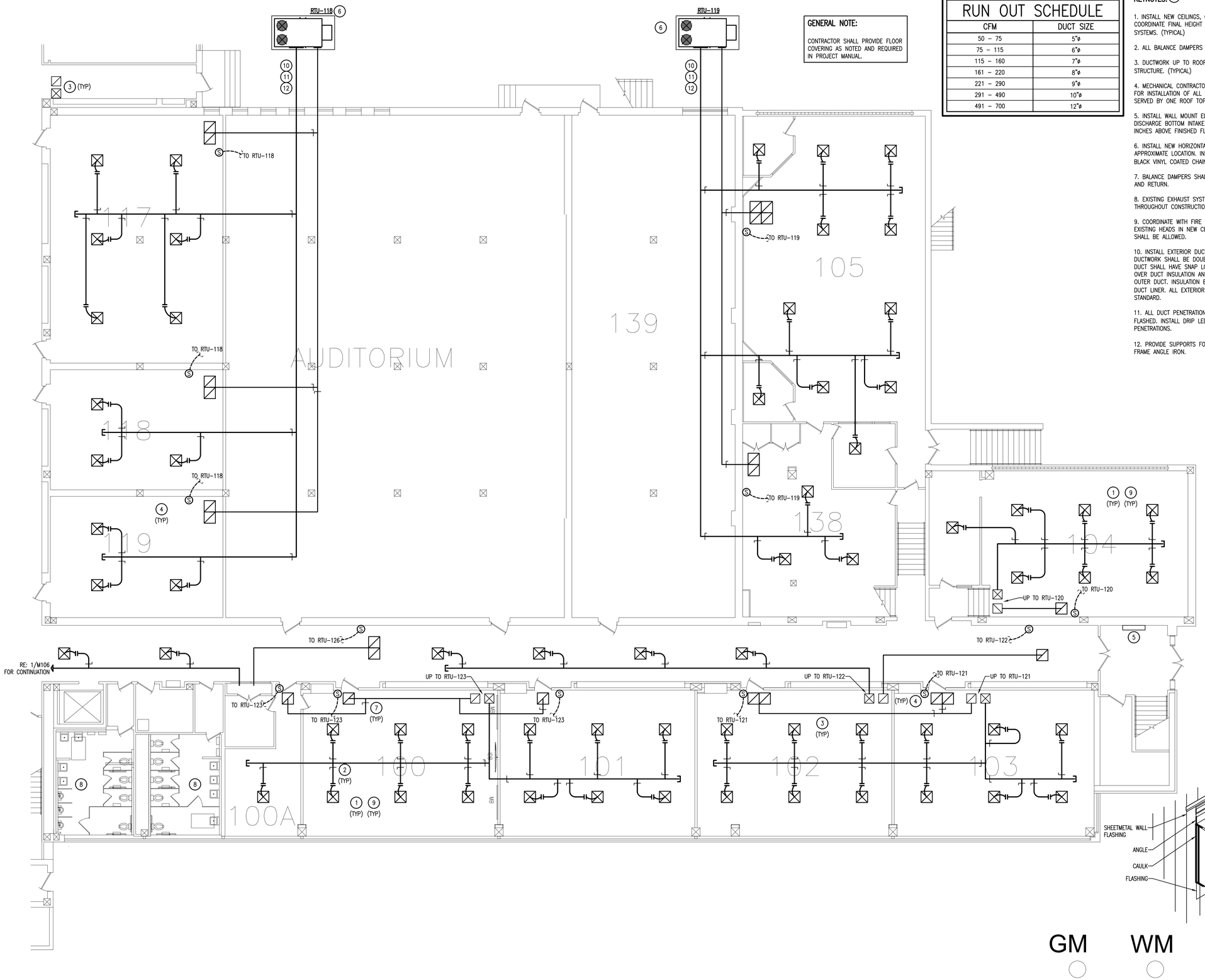
SHEET TITLE

FIRST LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M104



RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS. INSTALL SENSORS IN ALL CLASSROOMS SERVED BY ONE ROOF TOP UNIT.

5. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

6. INSTALL NEW HORIZONTAL DISCHARGE ROOF TOP UNIT ON GRADE AT THIS APPROXIMATE LOCATION. INSTALL UNIT ON REINFORCED CONCRETE PAD. INSTALL BLACK VINYL COATED CHAIN LINK FENCE ON PAD. PROVIDE 36" LOCKABLE GATE.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS, FLEX PIPING SHALL BE ALLOWED.

10. INSTALL EXTERIOR DUCTWORK FROM UNIT INTO BUILDING. ALL EXTERIOR DUCTWORK SHALL BE DOUBLE WALL DUCTWORK. INSIDE AND OUTSIDE LAYERS OF DUCT SHALL HAVE SNAP LOCK SEAMS. INSIDE DUCT SHALL BE FORMED TO FOLD OVER DUCT INSULATION AND CONNECT TO DUCT MATE FLANG THAT IS ATTACHED TO OUTER DUCT. INSULATION BETWEEN DUCTS SHALL BE 2 INCH 3 POUND DNESIDY DUCT LINER. ALL EXTERIOR DUCT TO BE CONSTRUCTED PER LATEST SMACNA'S STANDARD.

11. ALL DUCT PENETRATIONS THROUGH SIDE WALL SHALL BE FLASHED AND COUNTER FLASHED. INSTALL DRIP LEDGE EXTENDING A MINIMUM OF 6" IN ALL DIRECTIONS OF PENETRATIONS.

12. PROVIDE SUPPORTS FOR ALL EXTERIOR DUCTWORK. SUPPORTS SHALL BE "H" FRAME ANGLE IRON.

1 FIRST LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

2 SIDEWALL DUCT PENETRATION DETAIL
SCALE: NTS

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AREA OF WORK
KEY PLAN

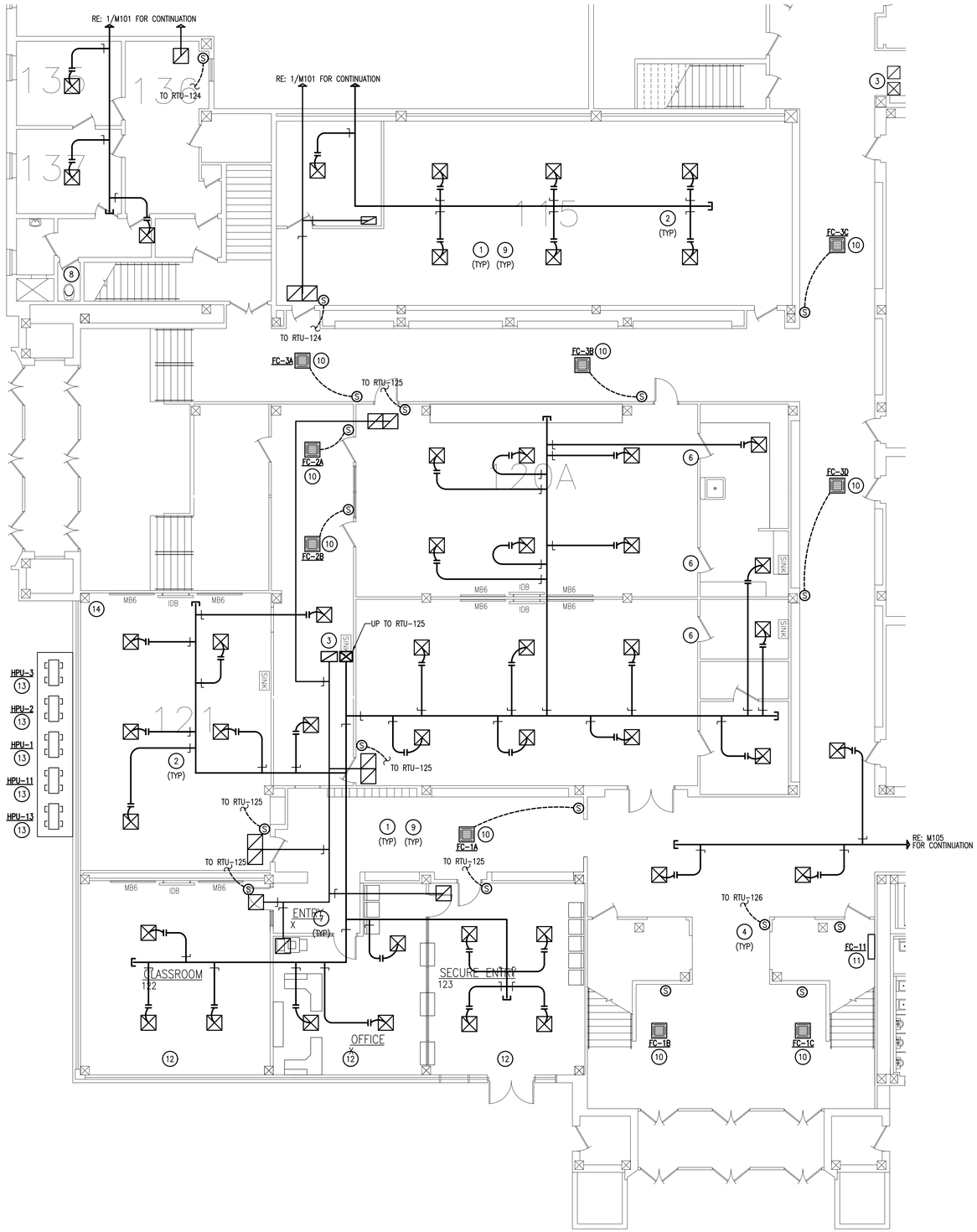
PROJECT TITLE
NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE
FIRST LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.
M105



1 FIRST LEVEL PARTIAL HVAC PLAN

Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN A COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. INSTALL DUCTWORK THRU WINDOW. REMOVE WINDOW AND INSTALL MAPPS PANEL. FLASH AND COUNTER FLASH DUCTWORK PENETRATION. KEEP DUCTWORK TIGHT TO STRUCTURE ONCE INSIDE BUILDING.

6. UNDERCUT DOOR MINIMUM 1 INCH.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

10. INSTALL MINI-SPLIT FAN COIL. INSTALL MANUFACTURER'S PROVIDED HARD WIRED THERMOSTAT. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED AND PROVIDED WITH A VAPOR BARRIER.

11. INSTALL WALL MOUNT MINI-SPLIT IN ELEVATOR EQUIPMENT ROOM.

12. COORDINATE ALL WORK IN THIS AREA WITH SECURED ENTRY PROJECT BY TPS. SECURED ENTRY CONTRACTOR IS CROSSLAND. REVIEW ARCHITECTURAL DRAWINGS FOR WALL INSTALLATION AND DETAILS OF SECURED ENTRY.

13. INSTALL HEAT PUMP UNITS ON REINFORCED CONCRETE PAD. INSTALL 6' TALL BLACK VINYL CHAIN LINK FENCE ON PAD. SLEEVE REFRIGERANT LINES THROUGH WALL. SEAL WITH WATERPROOF CAULKING. INSTALL ESCUTCHEON PLATES ON BOTH SIDES OF PENETRATION.

14. REINSTALL OWNER PROVIDED KILN. DUCT EXHAUST OUTSIDE WALL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL ELECTRICAL PLUMBING
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CA 3419 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
10/4/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

FIRST LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M106

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

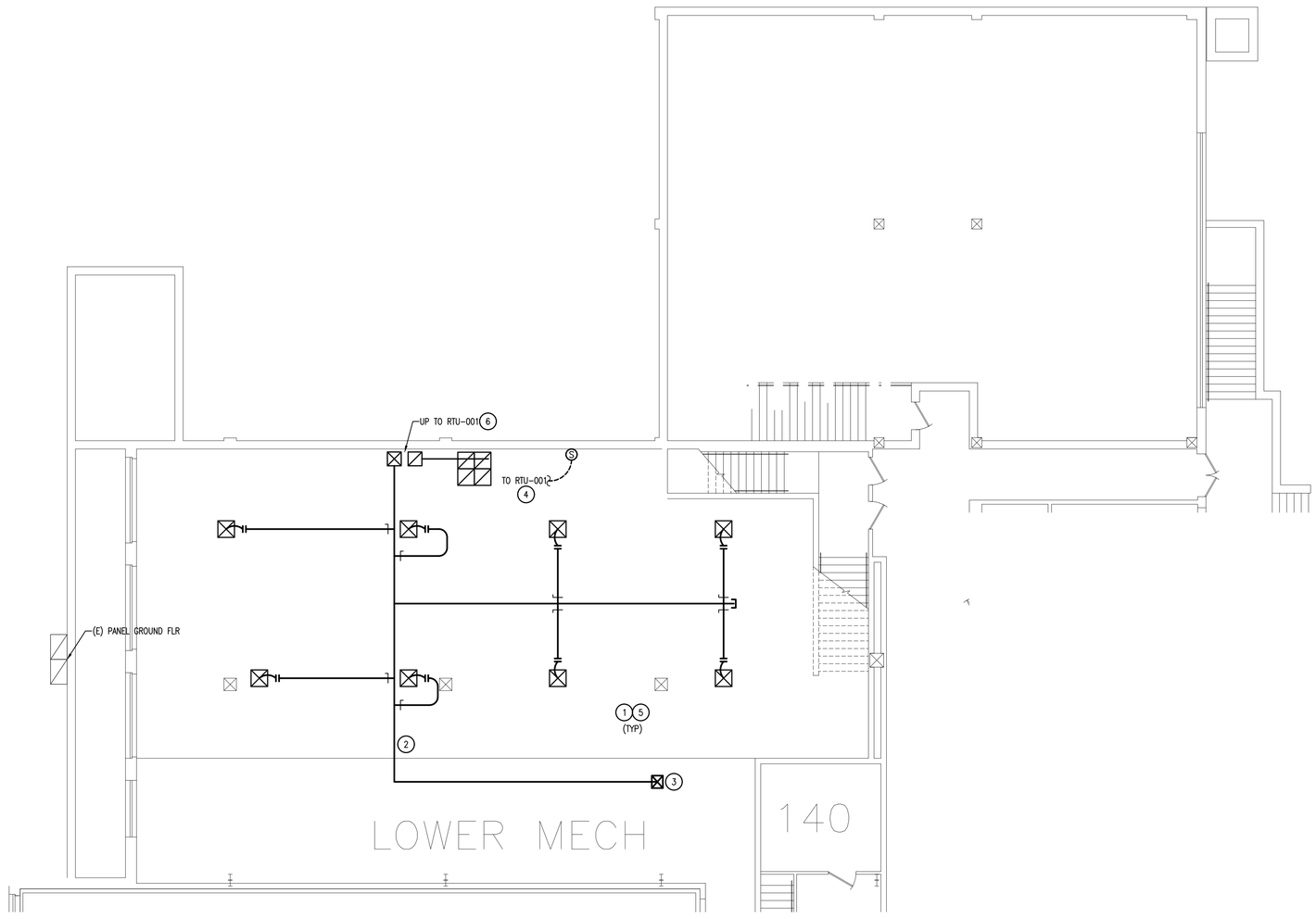
2. PENETRATE THROUGH WALL INTO MECHANICAL ROOM.

3. DROP DUCTWORK DOWN THROUGH MECHANICAL ROOM FLOOR INTO OFFICE. RE: 1/M102 FOR CONTINUATION

4. CONTRACTOR SHALL OBTAIN COST ESTIMATE FROM TPS ASSIGNED CONTROLS CONTRACTOR FOR COST OF INSTALLED CONTROL SYSTEM.

5. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

6. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF CHASE WITH BUILDING STRUCTURE.



1 FIRST LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
1401 SOUTH DENVER STREET, SUITE A, TULSA, OK. 74119
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10/6/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

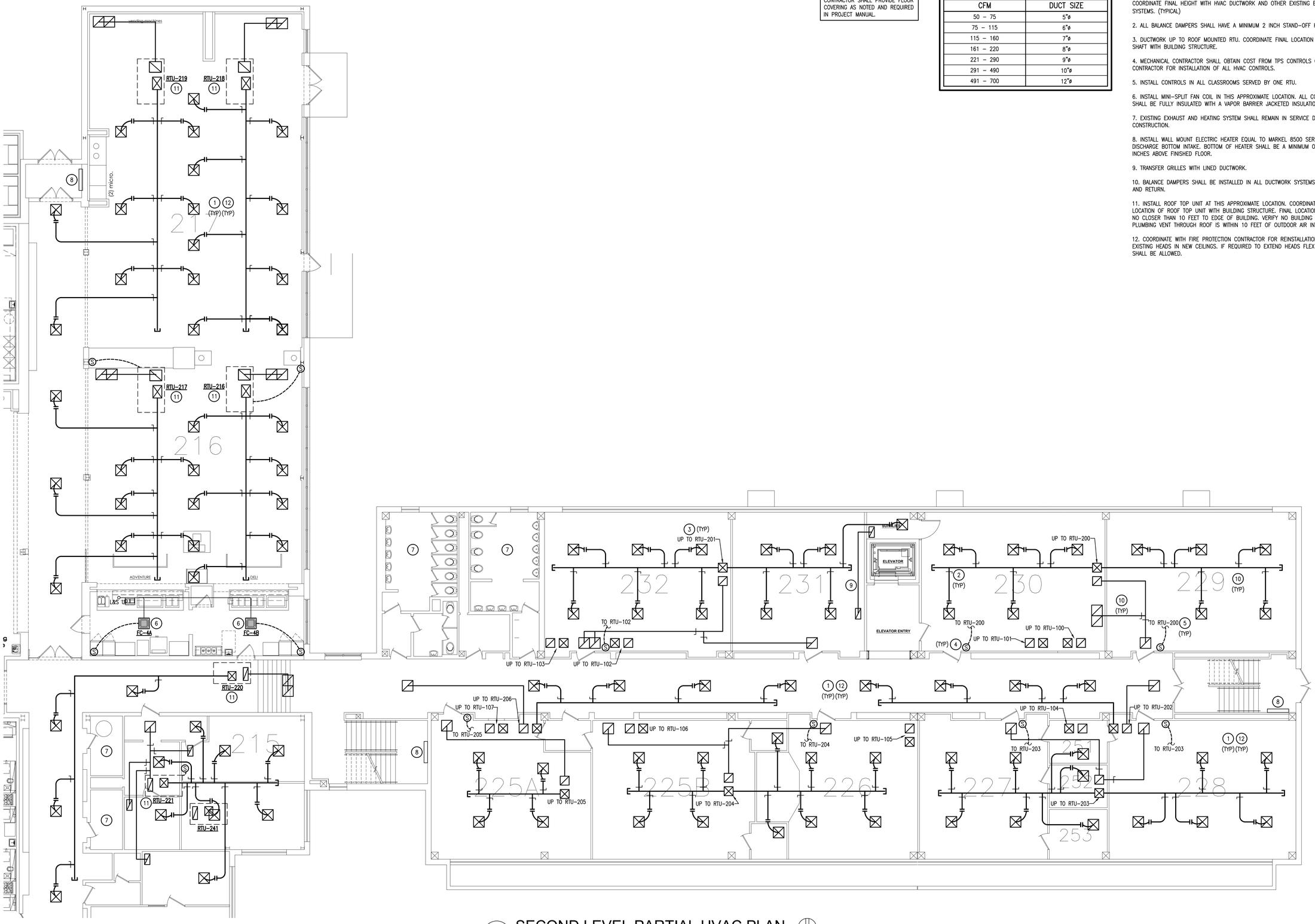
SHEET TITLE

FIRST LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M107



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE

CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF MOUNTED RTU. COORDINATE FINAL LOCATION OF DUCT SHAFT WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. INSTALL CONTROLS IN ALL CLASSROOMS SERVED BY ONE RTU.

6. INSTALL MINI-SPLIT FAN COIL IN THIS APPROXIMATE LOCATION. ALL CONDENSATE SHALL BE FULLY INSULATED WITH A VAPOR BARRIER JACKETED INSULATION.

7. EXISTING EXHAUST AND HEATING SYSTEM SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

8. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

9. TRANSFER GRILLES WITH LINED DUCTWORK.

10. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

11. INSTALL ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. FINAL LOCATION SHALL BE NO CLOSER THAN 10 FEET TO EDGE OF BUILDING. VERIFY NO BUILDING EXHAUST OR PLUMBING VENT THROUGH ROOF IS WITHIN 10 FEET OF OUTDOOR AIR INTAKE.

12. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

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10/4/2022

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TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

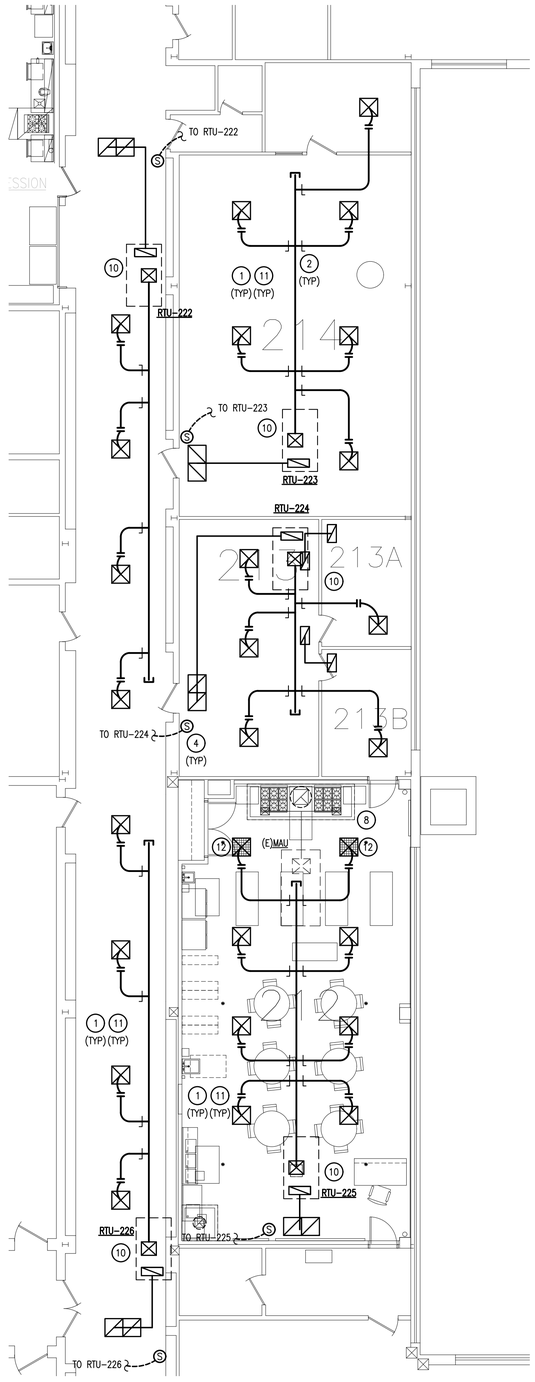
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

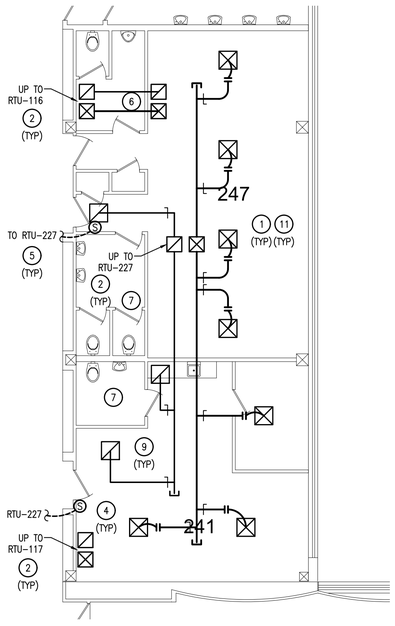
DATE: 10.06.2022

SHEET NO.

M201



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"



2 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF MOUNTED RTU. COORDINATE FINAL LOCATION OF DUCT SHAFT WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. INSTALL CONTROLS IN ALL CLASSROOMS SERVED BY ONE RTU.

6. OFFSET DUCTWORK ABOVE TOILET AND DROP DUCT DOWN TO 1ST FLOOR.

7. EXISTING EXHAUST AND HEATING SYSTEM SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

8. EXISTING HOOD AND ALL ASSOCIATED DUCTWORK, CONTROLS AND MECHANICAL EQUIPMENT SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

9. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

10. INSTALL ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. FINAL LOCATION SHALL BE NO CLOSER THAN 10 FEET TO EDGE OF BUILDING. VERIFY NO BUILDING EXHAUST OR PLUMBING VENT THROUGH ROOF IS WITHIN 10 FEET OF OUTDOOR AIR INTAKE.

11. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

12. ALL DIFFUSERS WITHIN 10 FEET OF KITCHEN EXHAUST HOOD SHALL BE EGGCRATE.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

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NATHAN HALE HIGH SCHOOL
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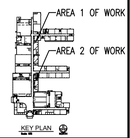
TULSA, OK 74129



PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLANS

DATE: 10.06.2022

SHEET NO.

M202

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE

CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

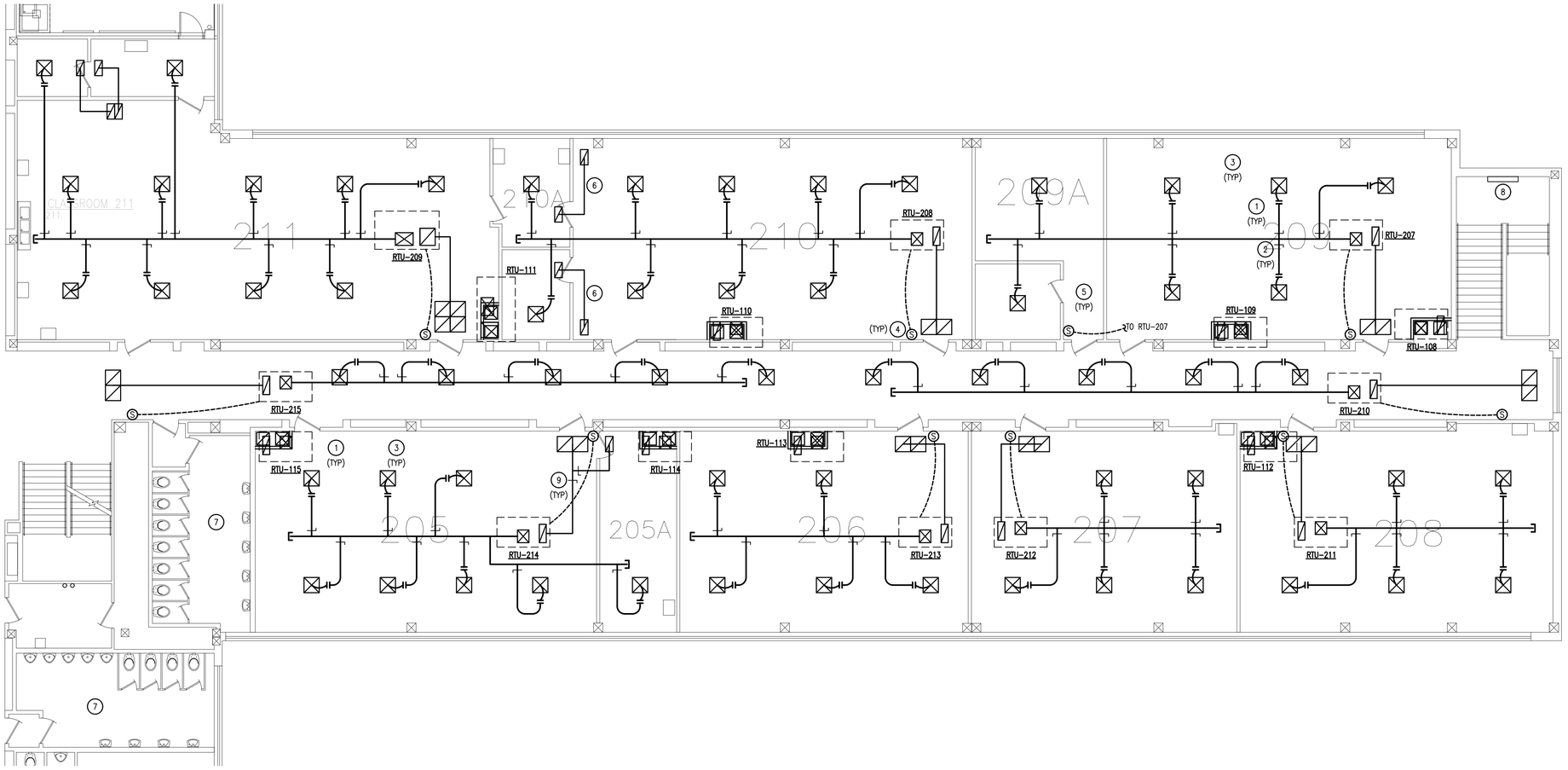
5. INSTALL CONTROLS IN ALL CLASSROOMS SERVED BY ONE RTU.

6. TRANSFER GRILLES WITH LINED DUCTWORK.

7. EXISTING EXHAUST AND HEATING SYSTEM SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

8. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

9. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL ENGINEERS
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REGISTERED PROFESSIONAL ENGINEER
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OKLAHOMA
10/6/2022

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TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

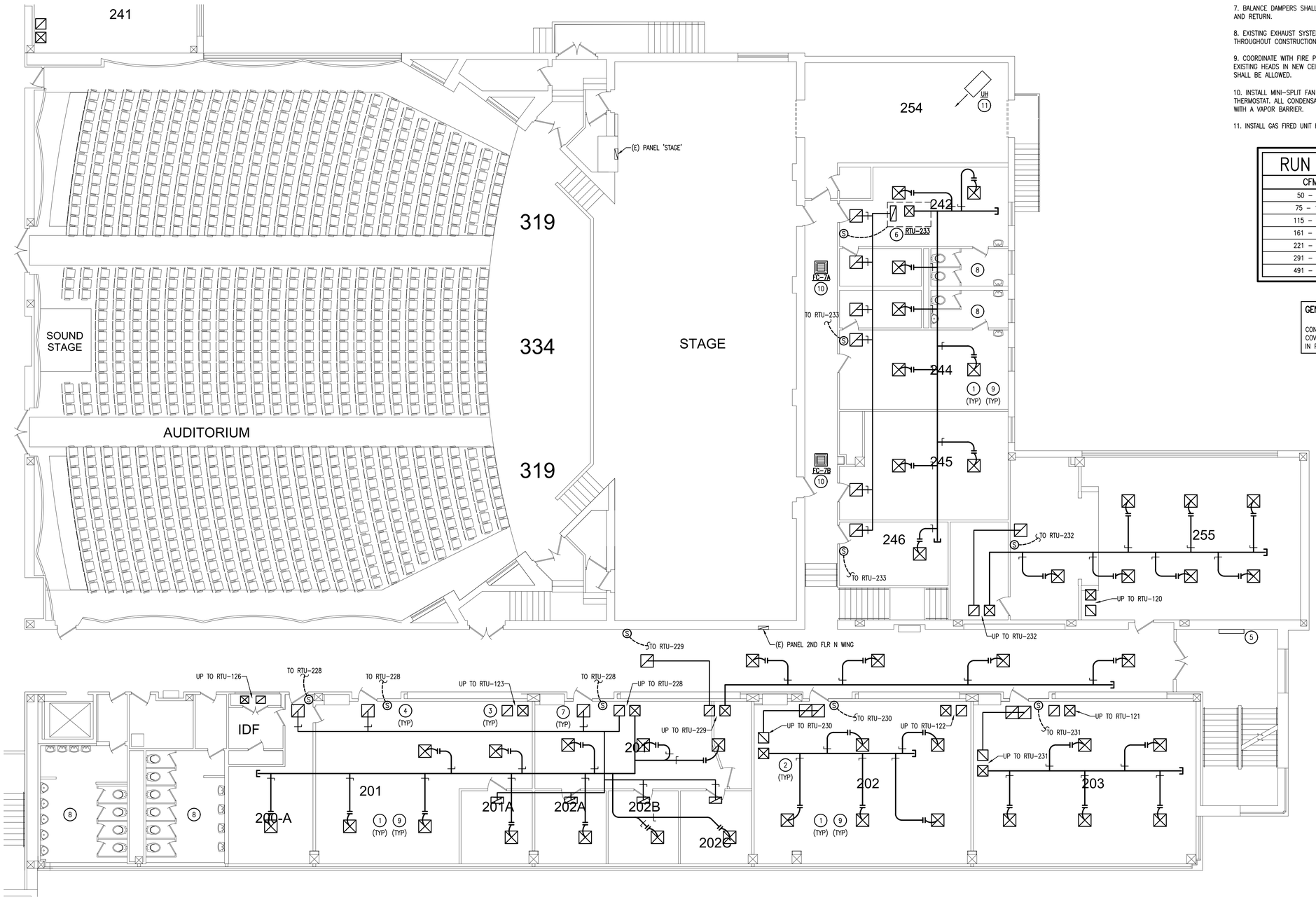
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M203



1 SECOND LEVEL PARTIAL HVAC PLAN

Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS. INSTALL A SENSOR IN ALL ROOMS SERVED BY ONE ROOF TOP UNIT.

5. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

6. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

10. INSTALL MINI-SPLIT FAN COIL. INSTALL MANUFACTURER'S PROVIDED HARD WIRED THERMOSTAT. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED AND PROVIDED WITH A VAPOR BARRIER.

11. INSTALL GAS FIRED UNIT HEATER IN BOILER ROOM.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

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REGISTERED PROFESSIONAL ENGINEER
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OKLAHOMA
10/4/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

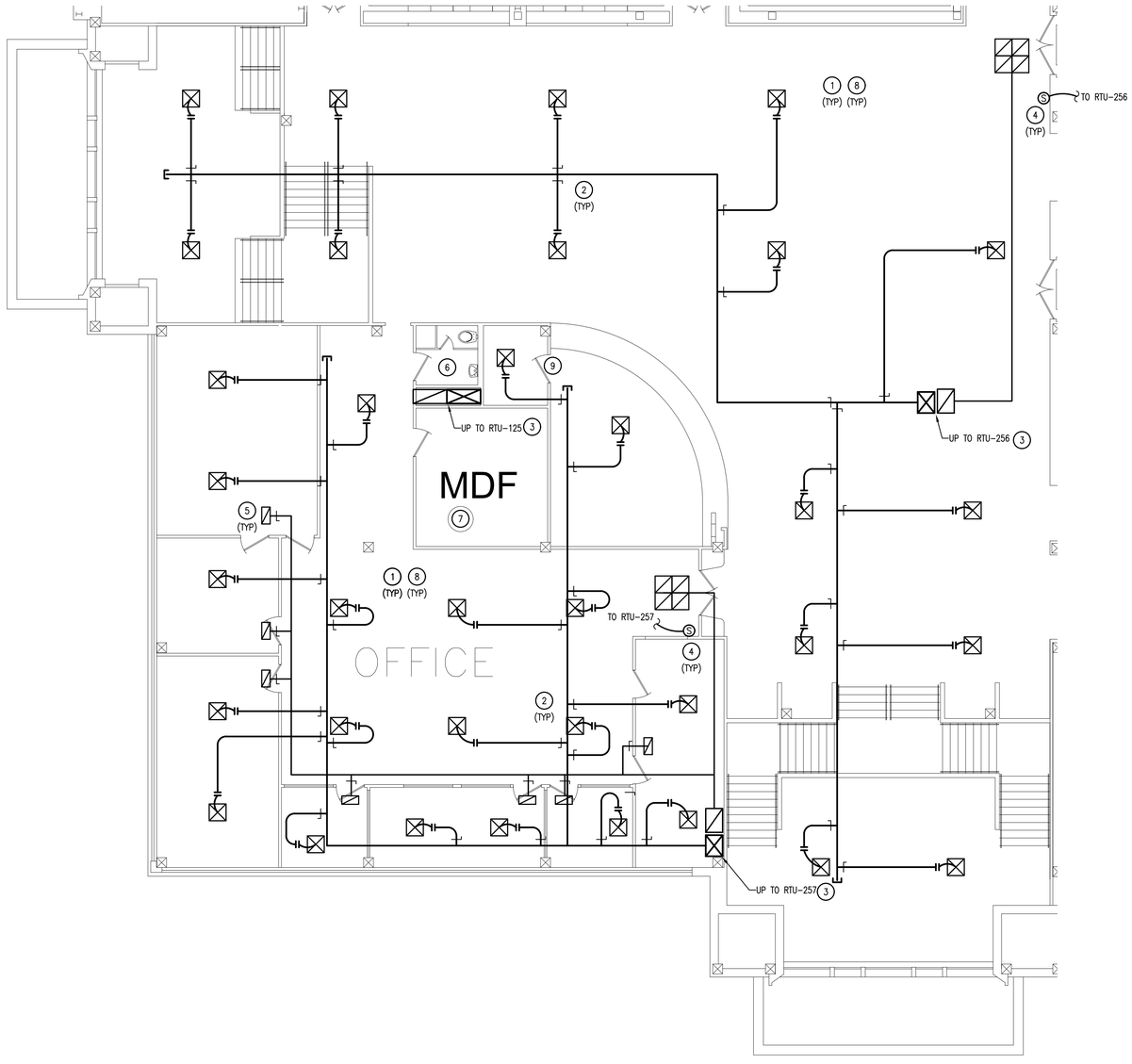
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M204



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

6. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

7. EXISTING UNIT IN MDF SHALL REMAIN IN SERVICE. CONTRACTOR SHALL CLEAN UNIT, LUBRICATE BEARINGS, CHANGE BELT AND CHECK THE REFRIDGERANT CHARGE. REPORT FINDINGS TO OWNER.

8. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

9. UNDERCUT DOOR A MINIMUM OF 1 INCH.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
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ENGINEER SEAL

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GAYLE D. GWINUP
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OKLAHOMA
10/4/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK
KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

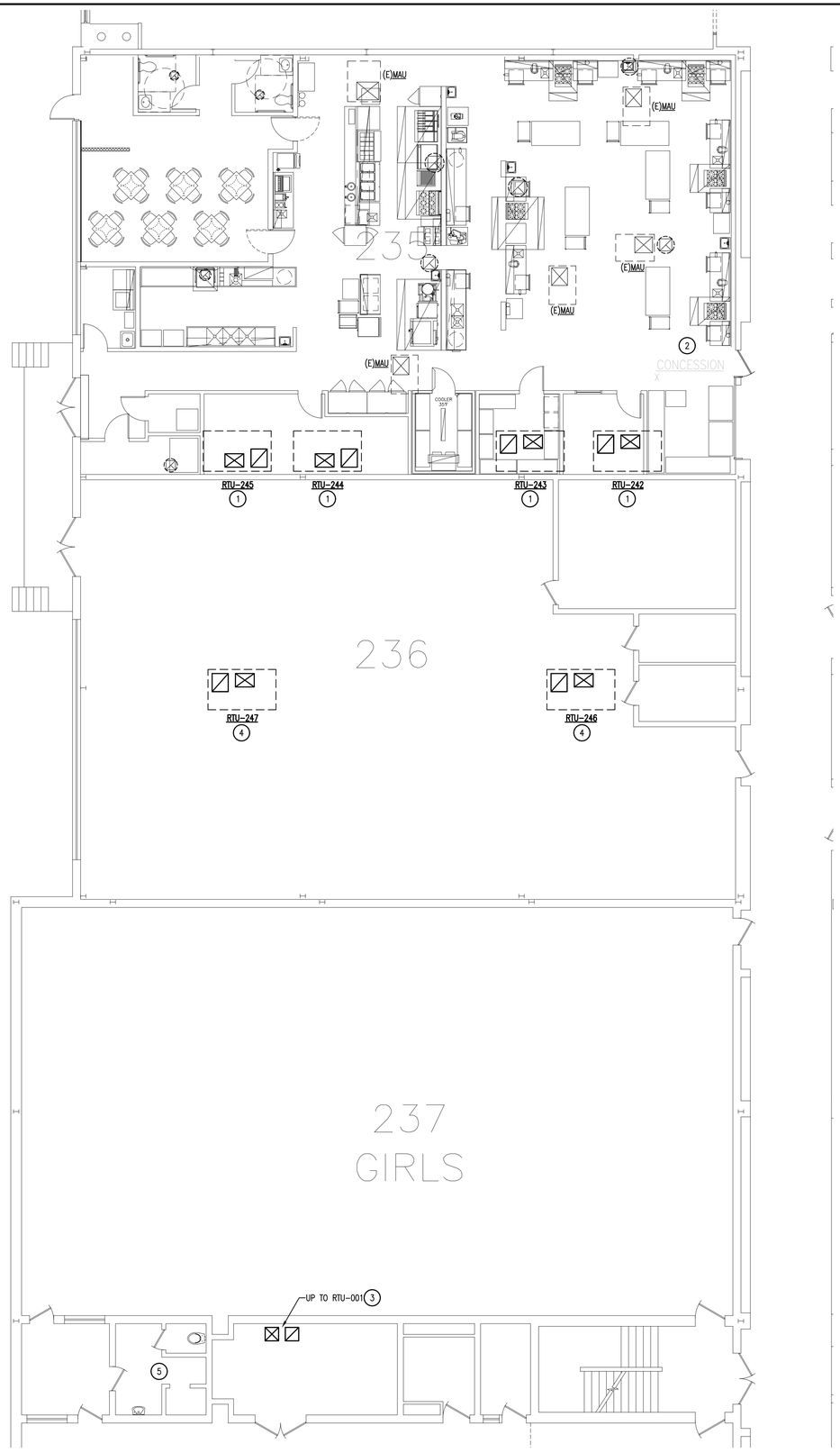
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M205



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW ROOF TOP UNIT ON EXISTING CURB AND RECONNECT DUCTWORK.
2. NO CEILING WORK IN CULINARY KITCHEN SPACE.
3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF CHASE WITH BUILDING STRUCTURE.
4. INSTALL NEW ROOF TOP UNIT ON EXISTING CURB. INSTALL NEW CONCENTRIC DIFFUSER.
5. EXISTING EXHAUST AND HEATING SYSTEM TO REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
CERTIFICATE OF AUTHORIZATION NO. 2020
1401 SOUTH BOWER STREET, SUITE A TULSA, OK. 74119
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EXP. 06/30/2024
CA 3419

ENGINEER SEAL

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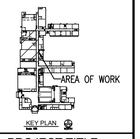
OKLAHOMA
10/6/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129



PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

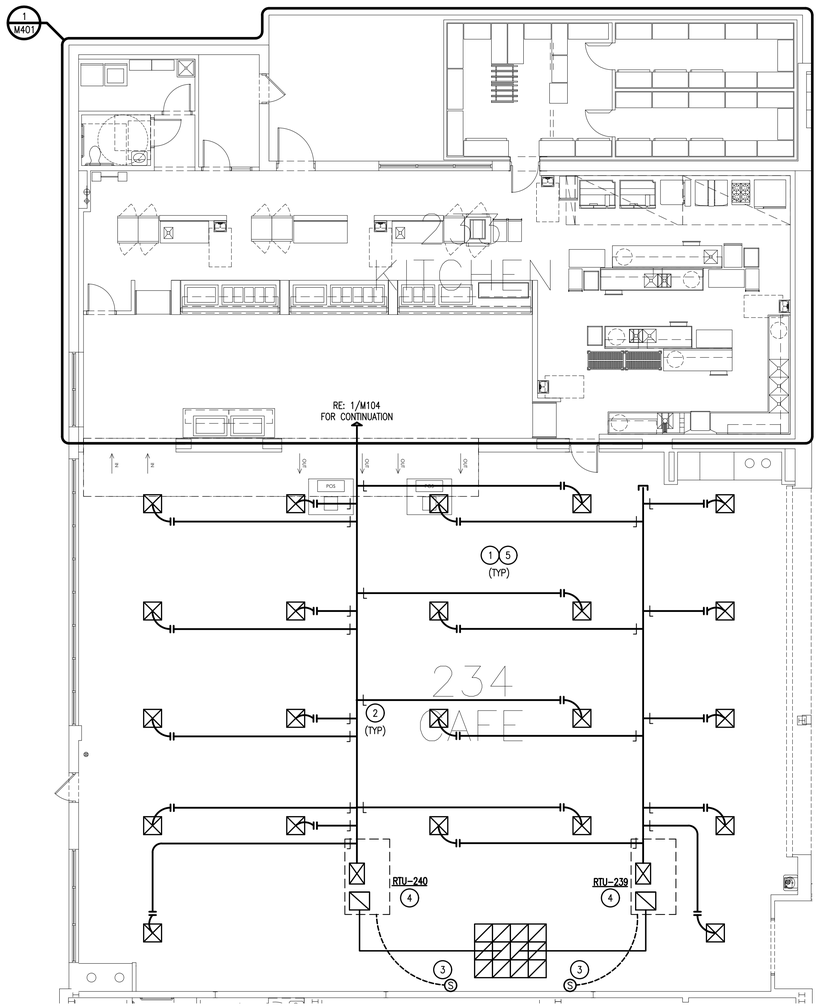
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M206



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

4. INSTALL ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. FINAL LOCATION SHALL BE NO CLOSER THAN 10 FEET TO EDGE OF BUILDING. VERIFY NO BUILDING EXHAUST OR PLUMBING VENT THROUGH ROOF IS WITHIN 10 FEET OF OUTDOOR AIR INTAKE.

5. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

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ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
10/6/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK
KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

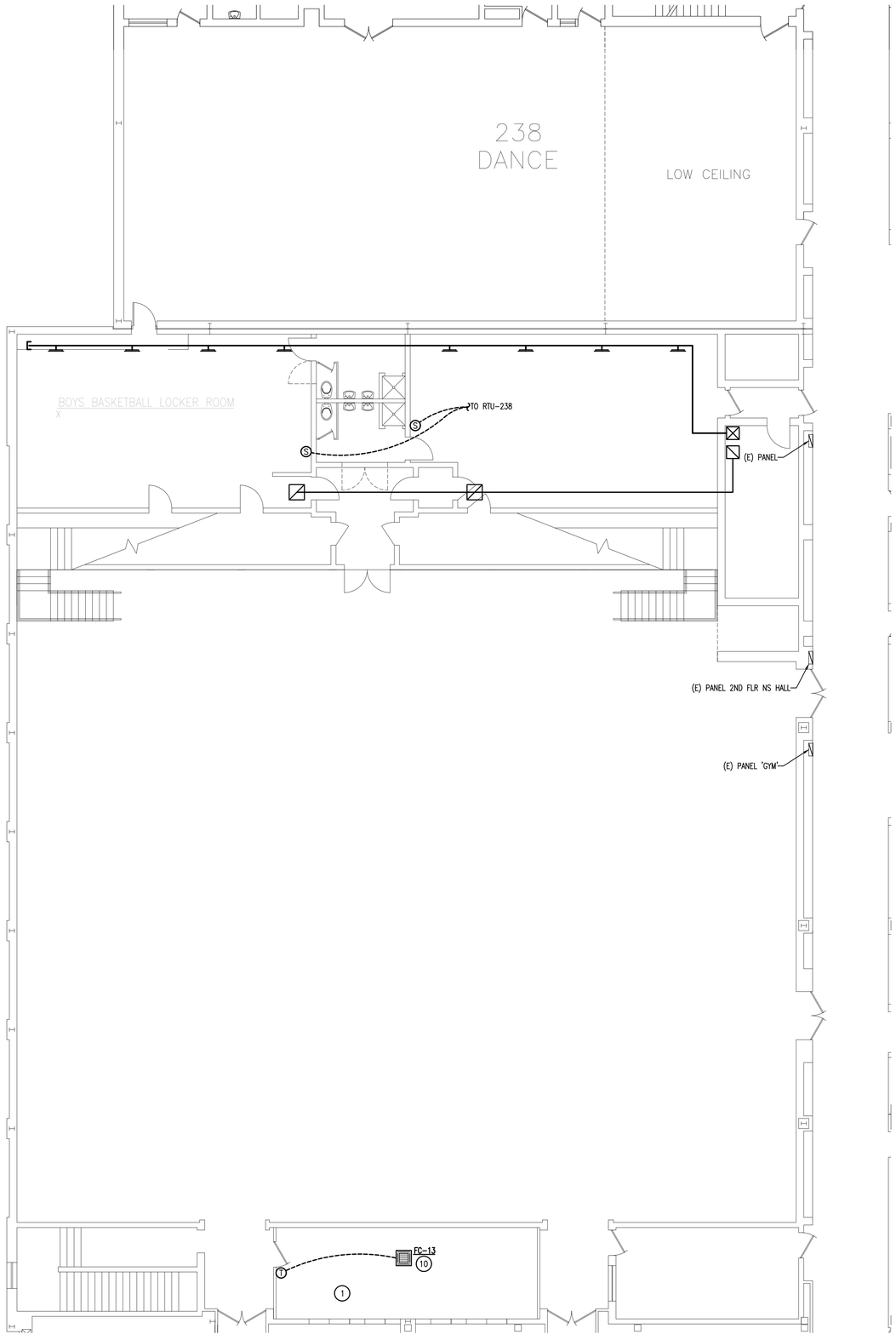
SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M207



1 SECOND LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK UP TO ROOF. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS. INSTALL A SENSOR IN ALL ROOMS SERVED BY ONE ROOF TOP UNIT.

5. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

6. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

10. INSTALL MINI-SPLIT FAN COIL. INSTALL MANUFACTURER'S PROVIDED HARD WIRED THERMOSTAT. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED AND PROVIDED WITH A VAPOR BARRIER.

RUN OUT SCHEDULE

CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

TULSA PUBLIC SCHOOLS

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10/4/2022

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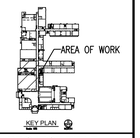


PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

SECOND LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M208

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK DOWN TO LOWER FLOORS. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

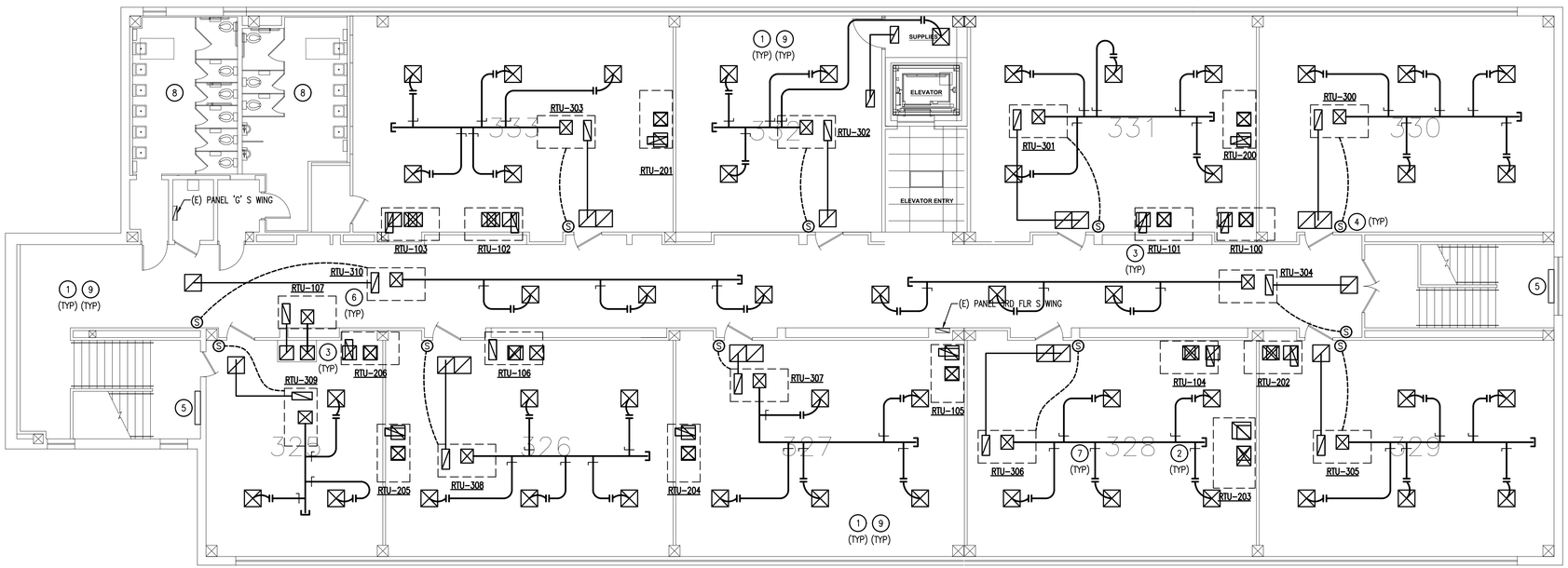
5. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

6. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.



1 THIRD LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

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1401 SOUTH DENVER STREET, SUITE A TULSA, OK. 74119
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REGISTERED PROFESSIONAL ENGINEER
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OKLAHOMA
10/6/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

THIRD LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M301

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND–OFF HANDLE.

3. DUCTWORK DOWN TO LOWER FLOORS. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE. (TYPICAL)

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

5. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.

6. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

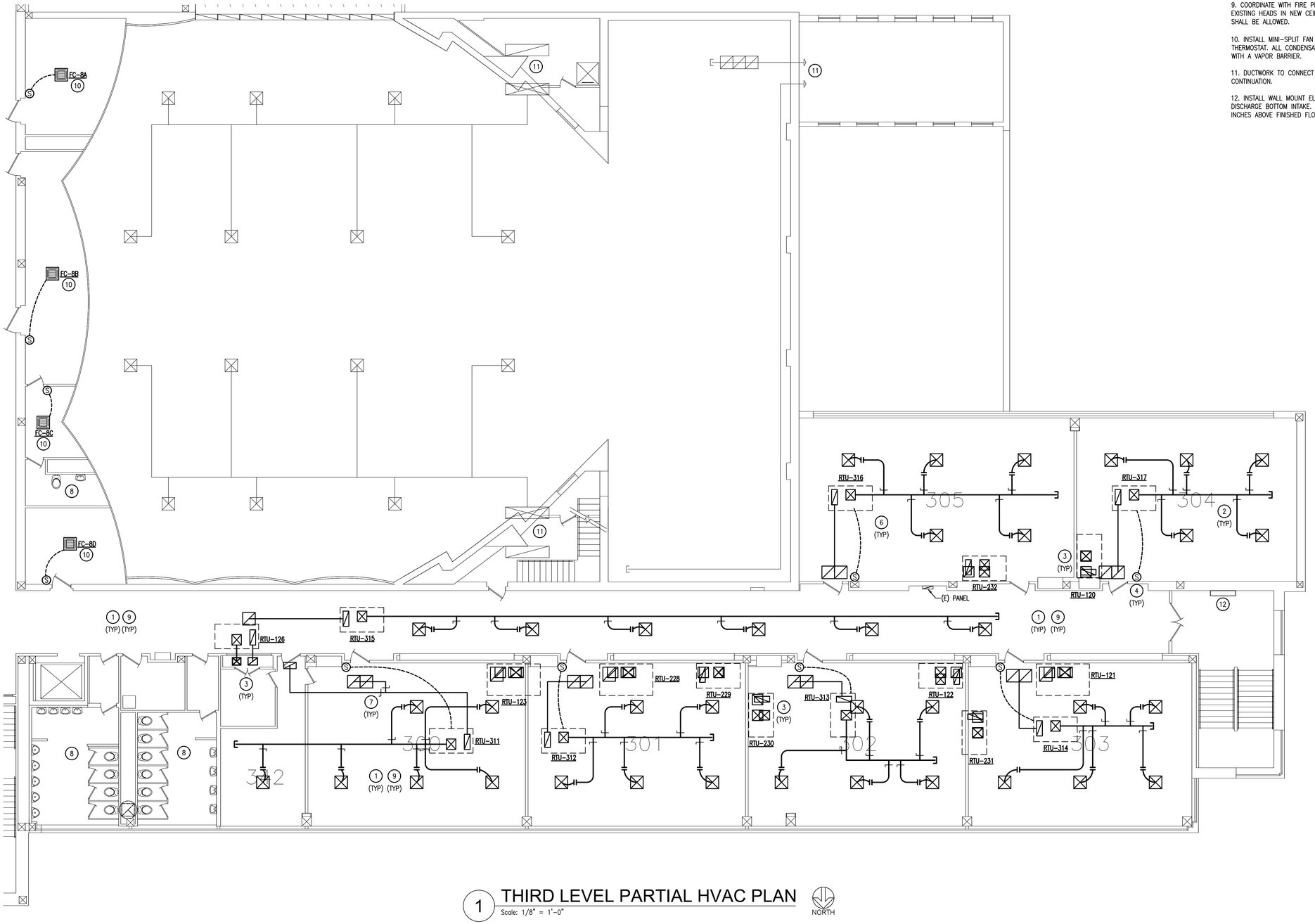
8. EXISTING EXHAUST SYSTEM AND TOILET HEATERS SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

10. INSTALL MINI–SPLIT FAN COIL. INSTALL MANUFACTURER'S PROVIDED HARD WIRED THERMOSTAT. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED AND PROVIDED WITH A VAPOR BARRIER.

11. DUCTWORK TO CONNECT TO NEW UNIT ON ROOF. REFERENCE ROOF PLANS FOR CONTINUATION.

12. INSTALL WALL MOUNT ELECTRIC HEATER EQUAL TO MARKEL 8500 SERIES. TOP DISCHARGE BOTTOM INTAKE. BOTTOM OF HEATER SHALL BE A MINIMUM OF 18 INCHES ABOVE FINISHED FLOOR.



1 THIRD LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'–0"

NORTH

TULSA PUBLIC SCHOOLS

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OKLAHOMA
10/4/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

THIRD LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M302

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK DOWN TO LOWER FLOORS. COORDINATE FINAL LOCATION OF DUCT SHAFT WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

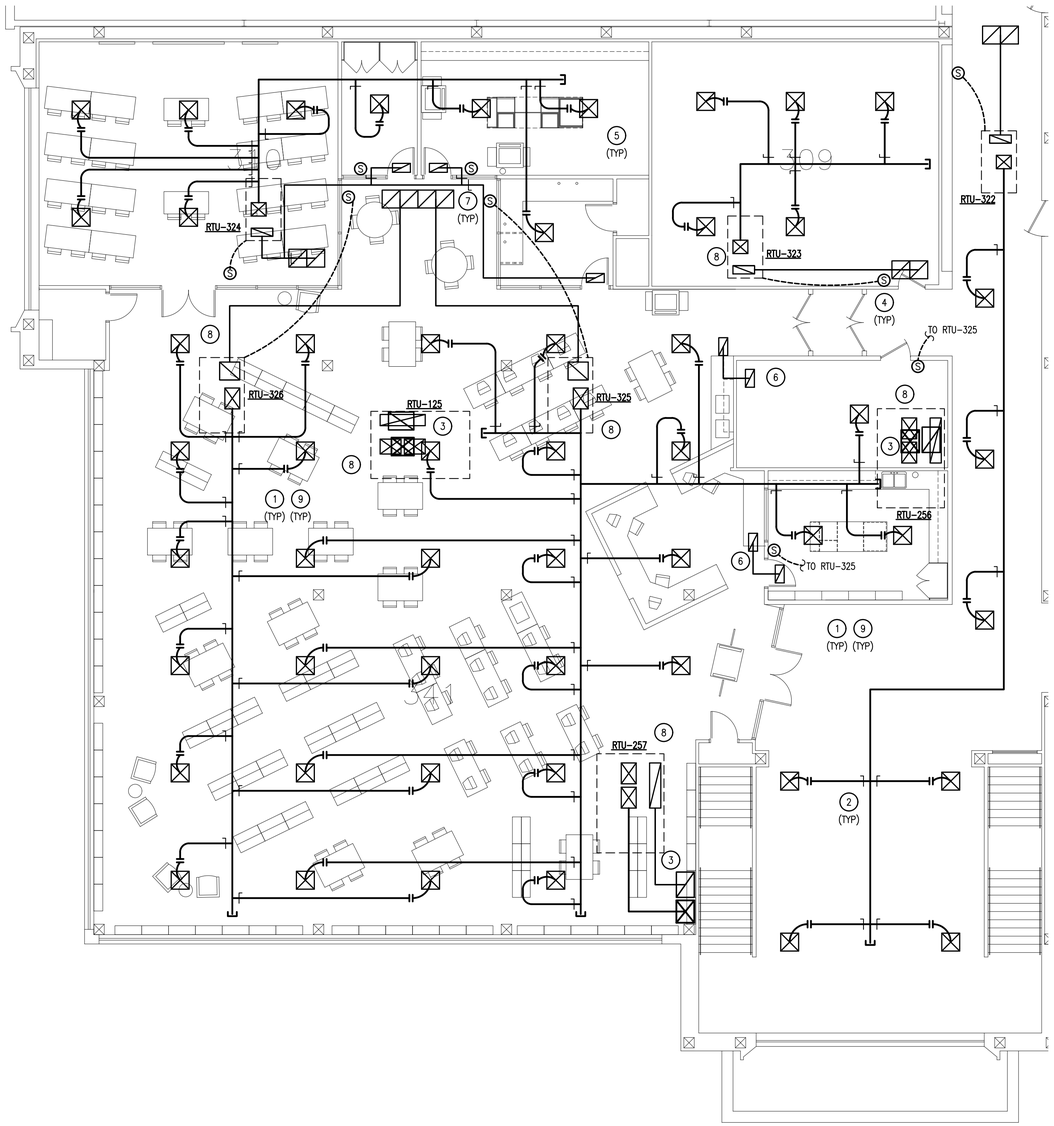
5. INSTALL CONTROLS IN ALL CLASSROOMS SERVED BY ONE RTU.

6. TRANSFER GRILLES WITH LINED DUCTWORK.

7. BALANCE DAMPERS SHALL BE INSTALLED IN ALL DUCTWORK SYSTEMS, SUPPLY AND RETURN.

8. INSTALL ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. FINAL LOCATION SHALL BE NO CLOSER THAN 10 FEET TO EDGE OF BUILDING. VERIFY NO BUILDING EXHAUST OR PLUMBING VENT THROUGH ROOF IS WITHIN 10 FEET OF OUTDOOR AIR INTAKE.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.



1 THIRD LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
CERTIFICATE OF AUTHORIZATION NUMBER 3199
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CA 3419 EXP: 06/30/2024

ENGINEER SEAL

REGISTERED PROFESSIONAL ENGINEER
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15478
OKLAHOMA
10/6/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA 1 OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

THIRD LEVEL PARTIAL HVAC PLANS

DATE: 10.06.2022

SHEET NO.

M303

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW ROOF TOP UNIT AT EXISTING LOCATION OF REMOVED ROOF TOP UNIT. PROVIDE CURB ADAPTOR AND CONCENTRIC DIFFUSER.

2. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

3. DUCTWORK DOWN TO GROUND FLOOR. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE.

4. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

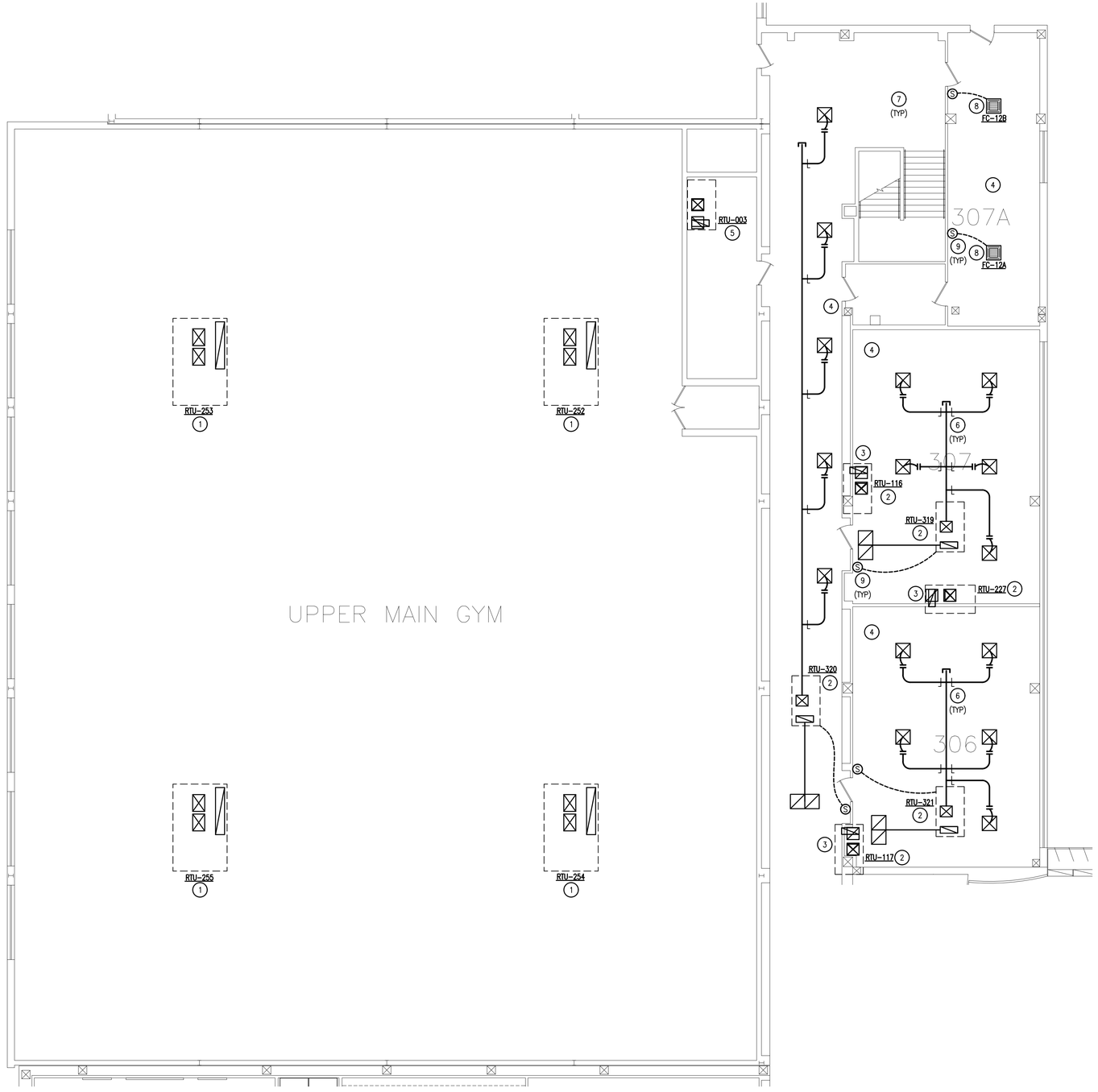
5. INSTALL NEW ROOF TOP UNIT AT LOCATION OF REMOVED ROOF TOP UNIT. PROVIDE CURB ADAPTOR AND RECONNECT TO EXISTING DUCTWORK SERVING WEIGHT ROOM.

6. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

7. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

8. INSTALL MINI-SPLIT FAN COIL. INSTALL MANUFACTURER'S PROVIDED HARD WIRED THERMOSTAT. ALL CONDENSATE PIPING SHALL BE FULLY INSULATED AND PROVIDED WITH A VAPOR BARRIER.

9. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.



1 THIRD LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
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CA 3419 EXP: 06/30/2024

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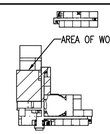
OKLAHOMA
10/6/2022

TULSA PUBLIC SCHOOLS
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129



PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

THIRD LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M304

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

KEYNOTES: (X)

1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK AND OTHER EXISTING BUILDING SYSTEMS. (TYPICAL)

2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

3. DUCTWORK DOWN TO GROUND FLOOR. COORDINATE FINAL LOCATION OF SHAFTS WITH BUILDING STRUCTURE.

4. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

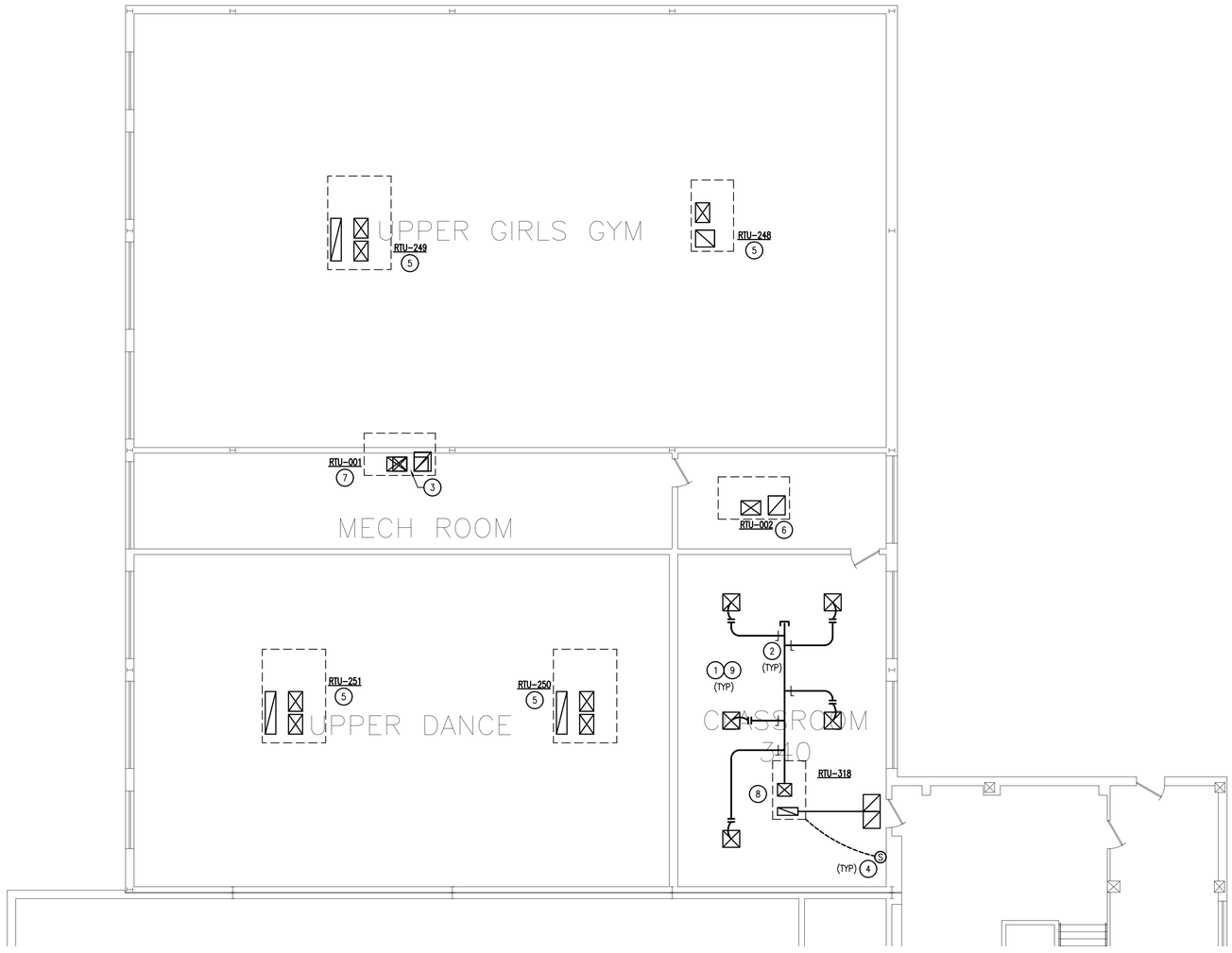
5. INSTALL NEW ROOF TOP UNIT AT EXISTING LOCATION OF REMOVED ROOF TOP UNIT. PROVIDE CURB ADAPTOR AND CONCENTRIC DIFFUSER.

6. INSTALL NEW ROOF TOP UNIT AT LOCATION OF REMOVED ROOF TOP UNIT. PROVIDE CURB ADAPTOR AND RECONNECT TO EXISTING DUCTWORK SERVING WEIGHT ROOM.

7. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION ROUTE DUCTWORK DOWN THROUGH FLOORS TO SERVE BASEBALL AREA ON GROUND FLOOR. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

8. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

9. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.



1 THIRD LEVEL PARTIAL HVAC PLAN
Scale: 1/8" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

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CA 3419 EXP: 06/30/2024

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REGISTERED PROFESSIONAL ENGINEER
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OKLAHOMA
10/6/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK
KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

THIRD LEVEL PARTIAL HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M305

GENERAL NOTE:

CONTRACTOR SHALL PROVIDE FLOOR COVERING AS NOTED AND REQUIRED IN PROJECT MANUAL.

RUN OUT SCHEDULE	
CFM	DUCT SIZE
50 – 75	5"ø
75 – 115	6"ø
115 – 160	7"ø
161 – 220	8"ø
221 – 290	9"ø
291 – 490	10"ø
491 – 700	12"ø

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW CEILINGS, GRID, AND TILES. KEEP CEILING AS HIGH AS POSSIBLE. COORDINATE FINAL HEIGHT WITH HVAC DUCTWORK.

M2. ALL BALANCE DAMPERS SHALL HAVE A MINIMUM 2 INCH STAND-OFF HANDLE.

M3. MECHANICAL CONTRACTOR SHALL OBTAIN COST FROM TPS CONTROLS CONTRACTOR CONTRACTOR FOR INSTALLATION OF ALL HVAC CONTROLS.

M4. INSTALL MINI-SPLIT FAN COIL IN THIS APPROXIMATE LOCATION. ALL CONDENSATE SHALL BE FULLY INSULATED WITH A VAPOR BARRIER TYPE INSULATION.

M5. INSTALL NEW RTU AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH BUILDING STRUCTURE.

M6. INSTALL NEW CEILING GRID AND TILES IN KITCHEN. TILES SHALL BE WASHABLE. COORDINATE ALL WORK IN KITCHEN AREA WITH TPS KITCHEN PROJECT.

M7. INSTALL NEW KITCHEN HOOD. COORDINATE HOOD PRICING WITH CAPTIVE AIR.

M8. INSTALL NEW ROOF MOUNTED EXHAUST FANS FOR KITCHEN HOOD. INSTALL GREASE DUCT FROM HOOD TO FANS IN COMPLIANCE WITH NFPA 96. COORDINATE PRICING WITH ROD HAMMICK AT CAPTIVE AIR.

M9. INSTALL KITCHEN HOOD MAKE UP AIR UNIT. INSTALL DUCTWORK FROM UNIT TO HOOD CONNECTIONS.

M10. ALL AIR DEVICES WITHIN 10 FEET OF KITCHEN HOOD SHALL BE EGG CRATE.

M11. COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR REINSTALLATION OF ALL EXISTING HEADS IN NEW CEILINGS. IF REQUIRED TO EXTEND HEADS FLEX PIPING SHALL BE ALLOWED.

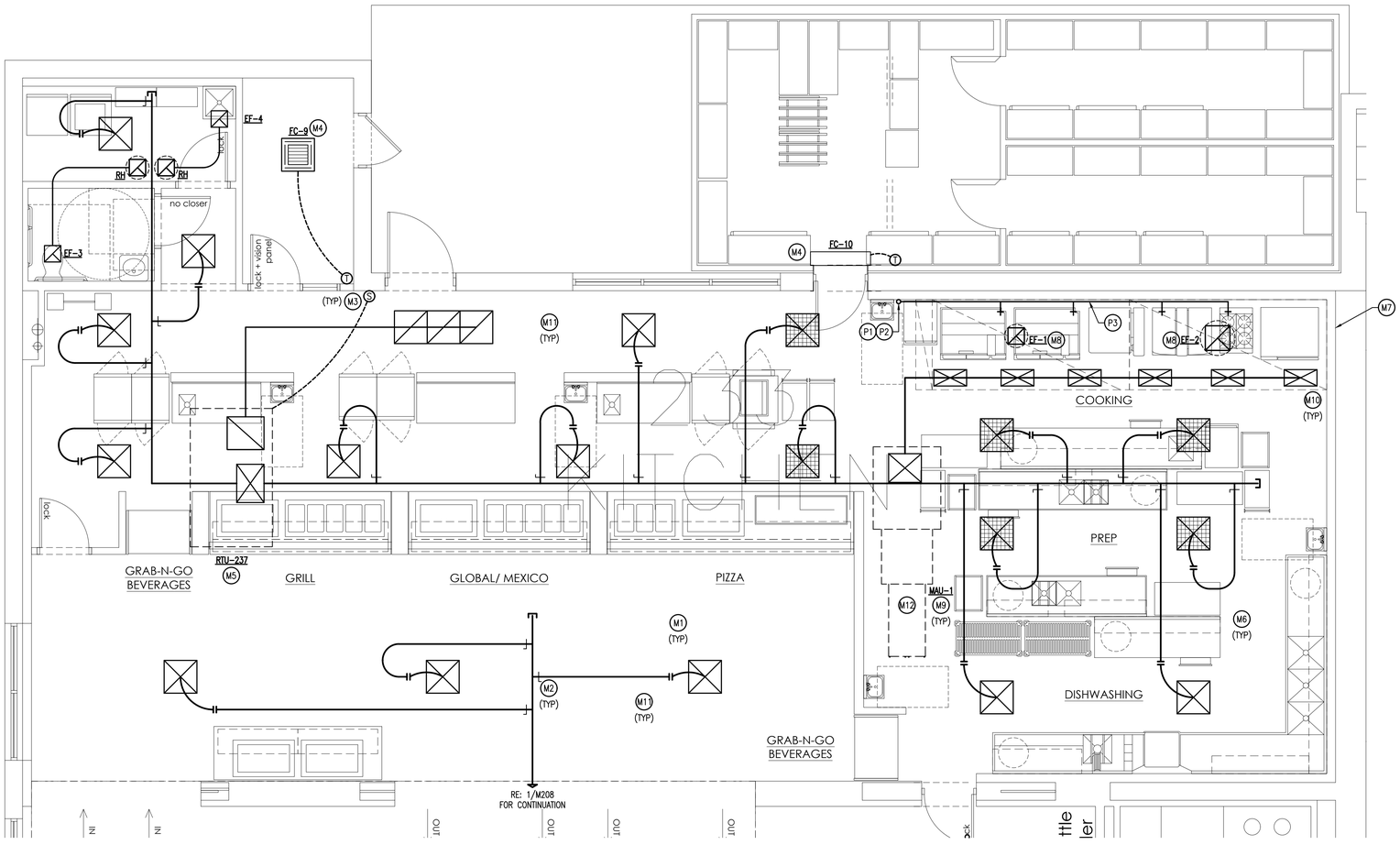
M12. PROVIDE AN ALTERNATE PRICE WITH ROD HAMMICK AT CAPTIVE AIR TO PROVIDE PARAGON ROOF TOP UNIT INSTEAD OF MAKE UP AIR UNIT AND RTU-237.

PLUMBING KEYNOTES: (PX)

P1. GAS UP THRU ROOF. REFERENCE ROOF PLAN MP105 FOR CONTINUATION.

P2. DROP GAS DOWN WALL TO SERVE KITCHEN EQUIPMENT UNDER COOK LINE HOOD. INSTALL A MECHANICAL GAS VALVE AT 60 INCHES ABOVE FINISHED FLOOR. INSTALL MANUAL SHUT-OFF VALVE UP STREAM OF MECHANICAL VALVE APPROXIMATELY 72 INCHES ABOVE FINISHED FLOOR.

P3. SECURE GAS PIPE TO FACE OF WALL FOR SERVICE TO COOK LINE EQUIPMENT.



1 SECOND LEVEL ENLARGED KITCHEN HVAC PLAN
Scale: 1/4" = 1'-0"

NORTH

TULSA PUBLIC SCHOOLS

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OKLAHOMA
10/6/2022

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NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129

AREA OF WORK

KEY PLAN

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

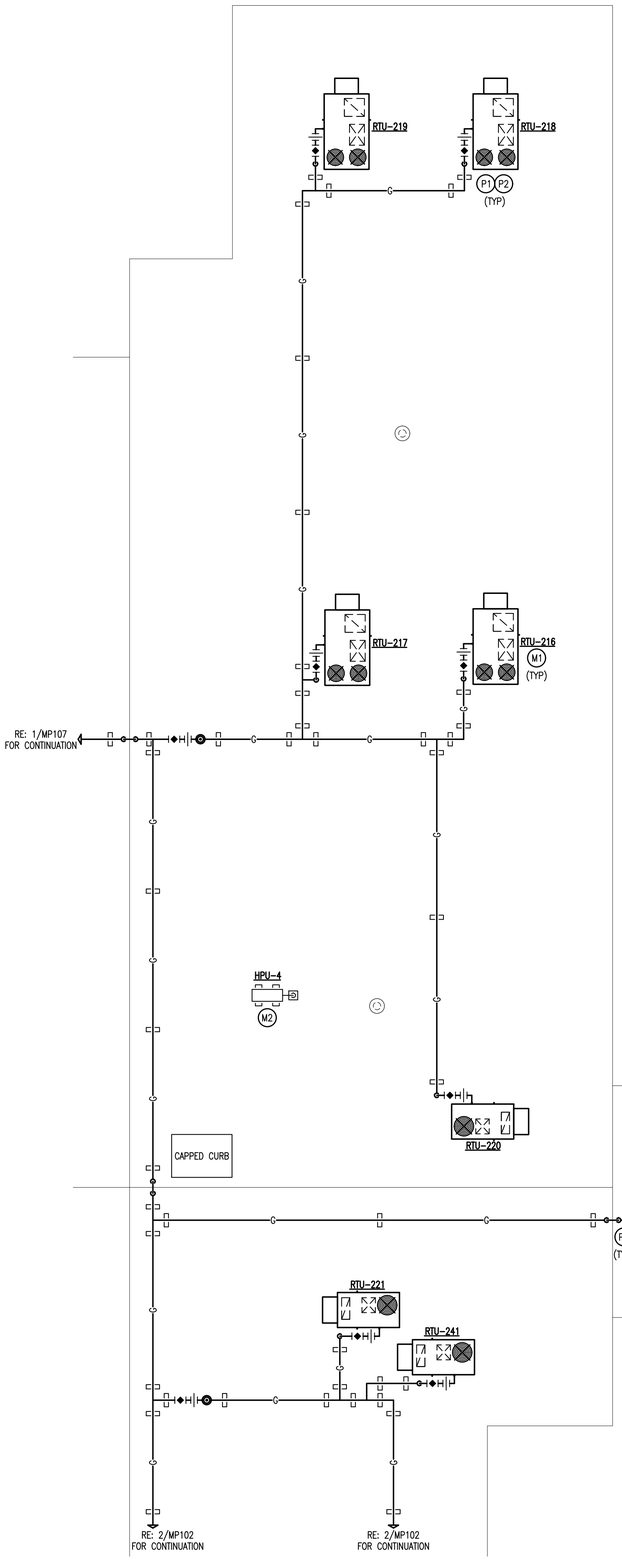
SHEET TITLE

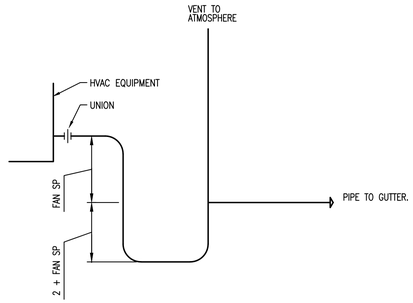
SECOND LEVEL ENLARGED KITCHEN HVAC PLAN

DATE: 10.06.2022

SHEET NO.

M401

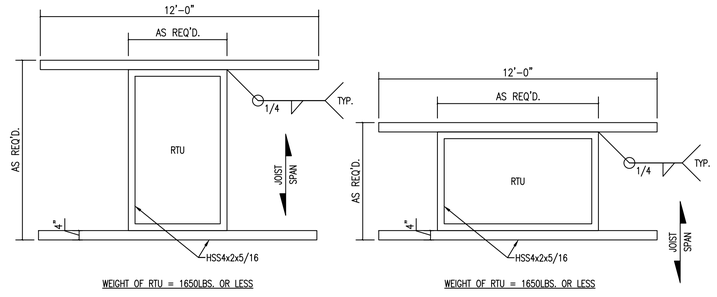




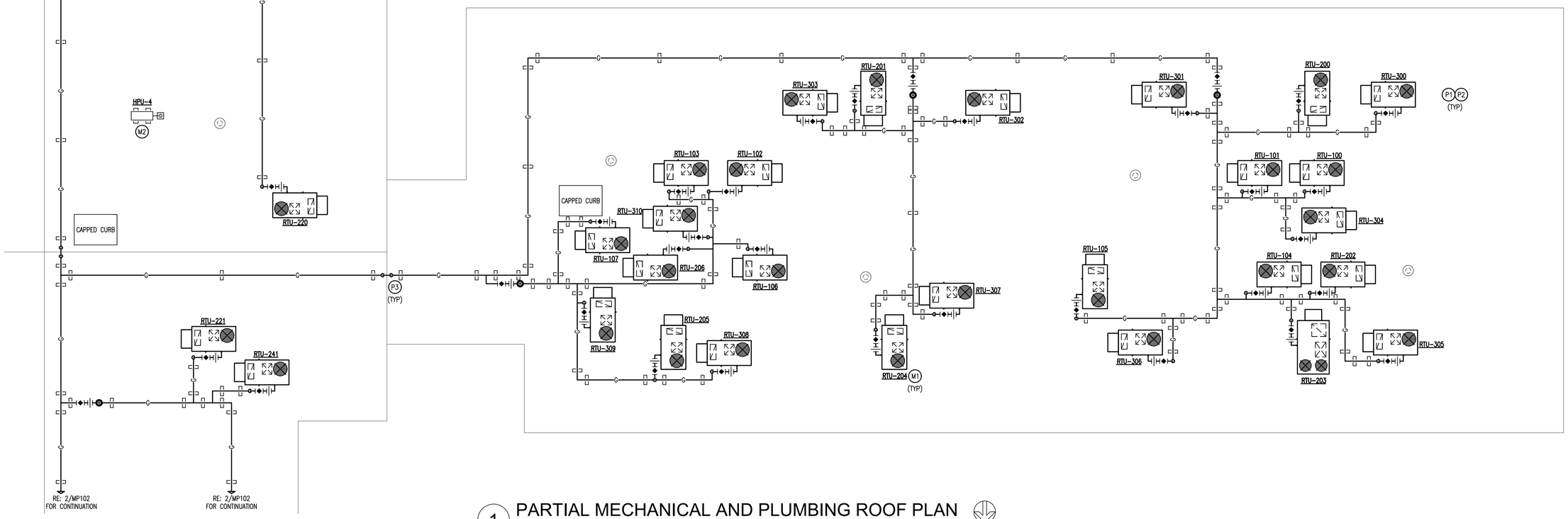
2 CONDENSATE TRAP DIAGRAM
Scale: NTS

BLOW THROUGH

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"



3 RTU FRAMING PLAN
SCALE: NTS



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN
Scale: 1/8" = 1'-0"

NORTH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE AND EXISTING DUCTWORK TO BE CONNECTED. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

M2. INSTALL HEAT PUMP UNIT ON ROOF. INSTALL EQUIPMENT RAILS TO STRUCTURE INSTALL UNIT TO RAILS. PENETRATE ROOF WITH REFRIGERANT LINES THROUGH HOODED ROOF CURB OR OTHER APPROVED METHOD BY ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY.

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER OR ROOF DRAIN AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P2. INSTALL NEW GAS SERVICE PIPING FOR ALL ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

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CA 3419 EXP: 06/30/2024

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GAYLE D. GWINUP
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OKLAHOMA
10/6/2022

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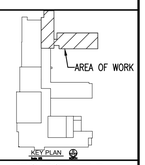
6960 E 21st ST
TULSA, OK 74129



PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

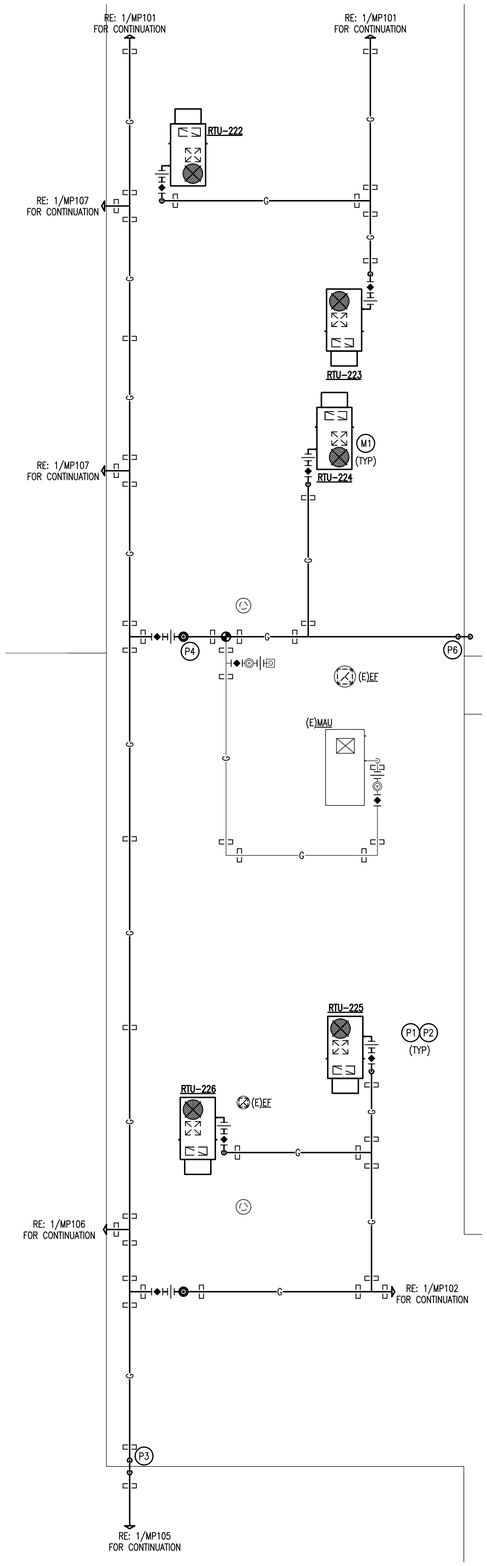
SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

DATE: 10.06.2022

SHEET NO.

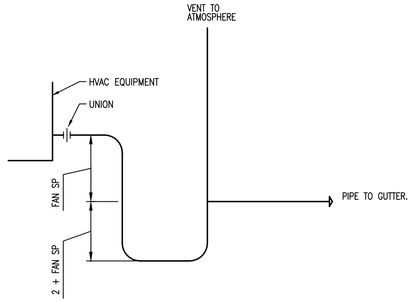
MP101



2 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

Scale: 1/8" = 1'-0"

NORTH

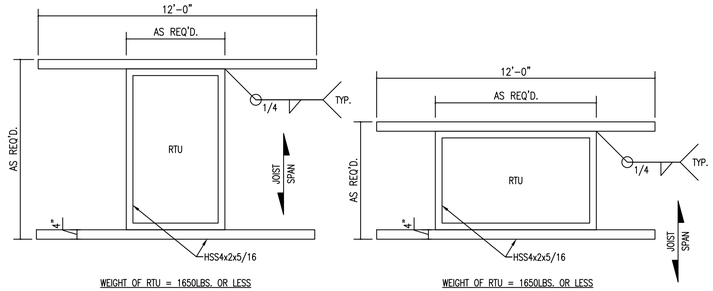


3 CONDENSATE TRAP DIAGRAM

Scale: NTS

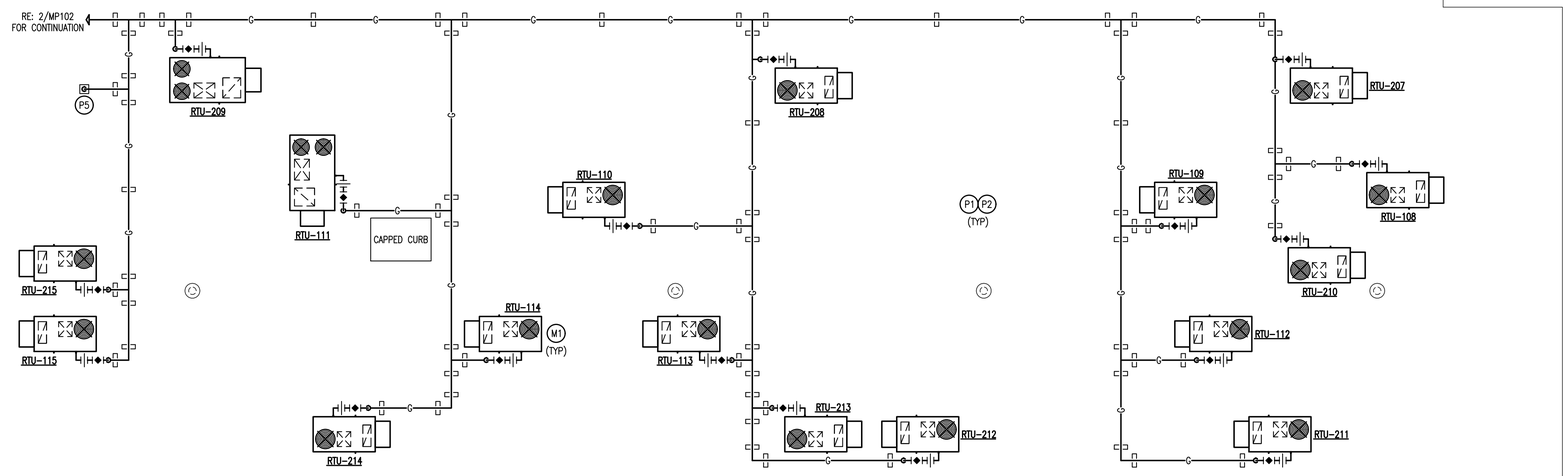
BLOW THROUGH

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"



4 RTU FRAMING PLAN

SCALE: NTS



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

Scale: 1/8" = 1'-0"

NORTH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE AND EXISTING DUCTWORK TO BE CONNECTED. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

M2. RELOCATE EXHAUST FAN TO BE A MINIMUM OF 10 FEET FROM UNIT OUTDOOR AIR INTAKE.

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P2. INSTALL NEW GAS SERVICE PIPING FOR ALL NEW ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

P4. CONNECT EXISTING GAS PIPE TO NEW AT THIS APPROXIMATE LOCATION.

P5. GAS PIPING INTO BUILDING. PENETRATE THROUGH ROOF WITH HOODED ROOF CURB ON OTHER APPROVED METHOD BY ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY.

P6. DROP DOWN VERTICAL WALL TO BOILER ROOM WITH NEW GAS SERVICE. PAINT EXPOSED PIPE ON VERTICAL WALL AS DIRECTED BY OWNER.

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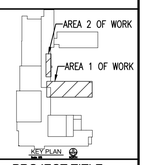


PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

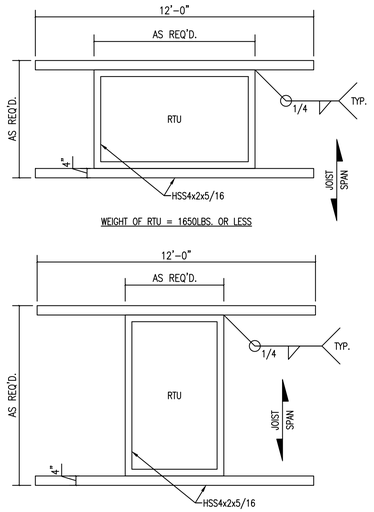
SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLANS

DATE: 10.06.2022

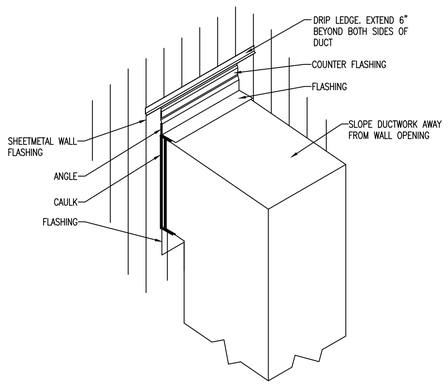
SHEET NO.

MP102



3 RTU FRAMING PLAN

SCALE: NTS

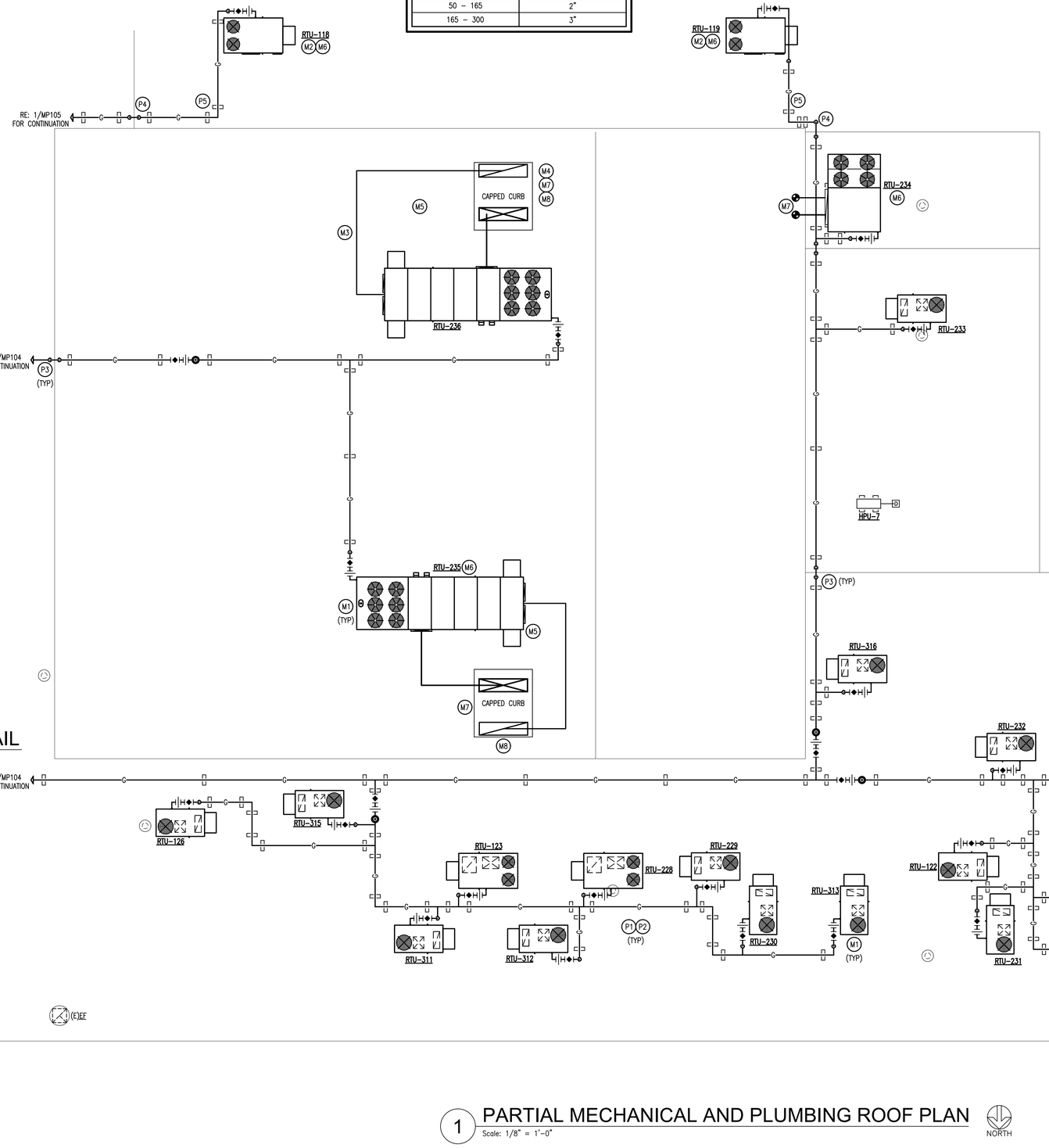


2 SIDEWALL DUCT PENETRATION DETAIL

SCALE: NTS

CONDENSATE PIPE RUN OUT SCHEDULE

AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

Scale: 1/8" = 1'-0"

NORTH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE AND EXISTING DUCTWORK TO BE CONNECTED. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

M2. UNIT INSTALLED ON GRADE. RE:MXX

M3. INSTALL EXTERIOR DUCTWORK FROM UNIT INTO BUILDING. ALL EXTERIOR DUCTWORK SHALL BE DOUBLE WALL DUCTWORK. INSIDE AND OUTSIDE LAYERS OF DUCT SHALL HAVE SNAP LOCK SEAMS. INSIDE DUCT SHALL BE FORMED TO FOLD OVER DUCT INSULATION AND CONNECT TO DUCT MATE FLANG THAT IS ATTACHED TO OUTER DUCT. INSULATION BETWEEN DUCTS SHALL BE 2 INCH 3 POUND DNESIDY DUCT LINER. ALL EXTERIOR DUCT TO BE CONSTRUCTED PER LATEST SMACNA'S STANDARD.

M4. ALL DUCT PENETRATIONS THROUGH SIDE WALL SHALL BE FLASHED AND COUNTER FLASHED. INSTALL DRIP LEDGE EXTENDING A MINIMUM OF 6" IN ALL DIRECTIONS OF PENETRATIONS.

M5. PROVIDE SUPPORTS FOR ALL EXTERIOR DUCTWORK. SUPPORTS SHALL BE "H" FRAME ANGLE IRON.

M6. UNITS SHALL BE INSTALLED ON A CURB AND ARE TO BE CONFIGURED WITH HORIZONTAL DISCHARGE.

M7. CONNECT TO EXISTING DUCTWORK AT THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY EXACT SIZE OF EXISTING DUCTWORK.

M8. CONTRACTOR SHALL INSTALL PENTHOUSE ON EXISTING CURB. REFERENCE ARCHITECTURAL DRAWINGS FOR PENTHOUSE CONSTRUCTION.

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P2. INSTALL NEW GAS SERVICE PIPING FOR ALL NEW ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

P4. DROP GAS PIPE DOWN VERTICAL WALL. SECURE TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT PIPE AND SUPPORTS AS DIRECTED BY OWNER.

P5. ROUTE GAS PIPE ON WALL TO DUCTWORK. SECURE PIPING TO DUCTWORK SUPPORT FRAMES TO ROOF TOP UNIT.

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EXP. 06/30/2024

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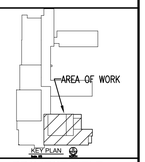


PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

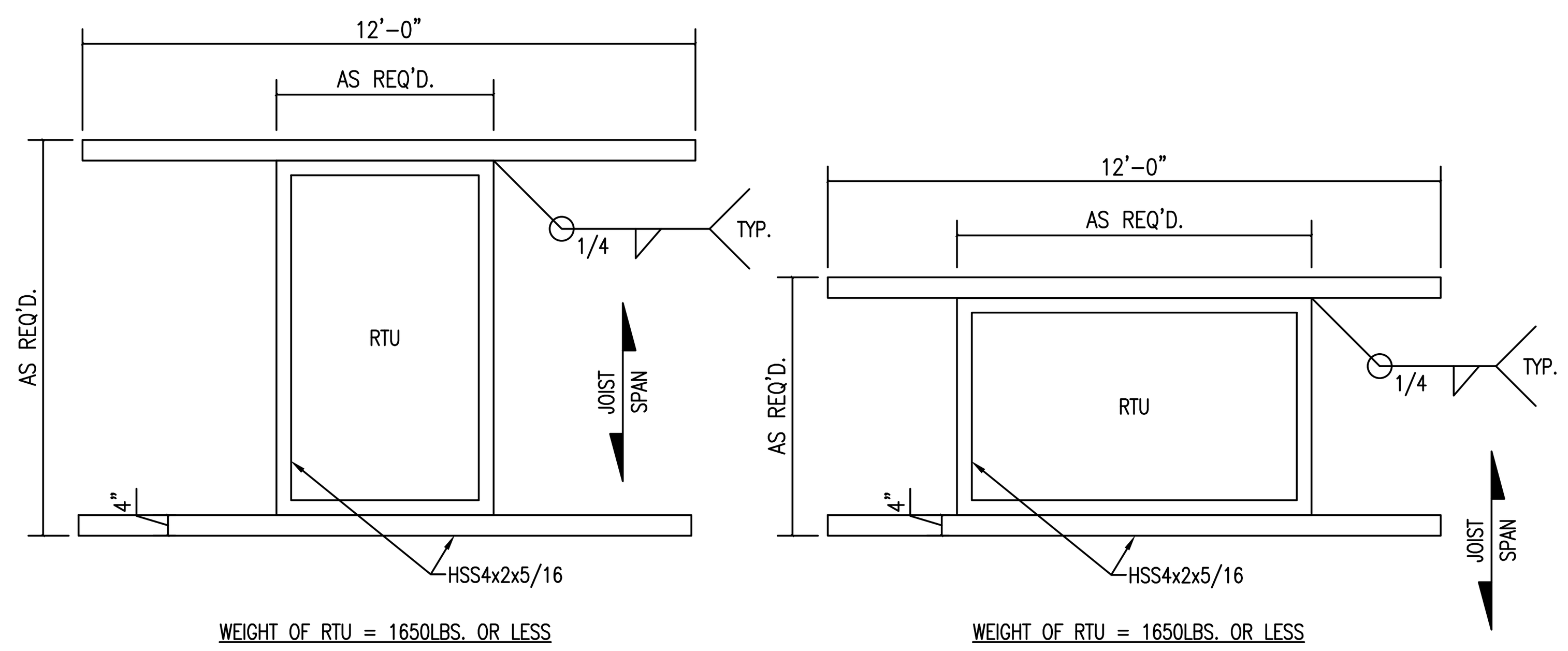
SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

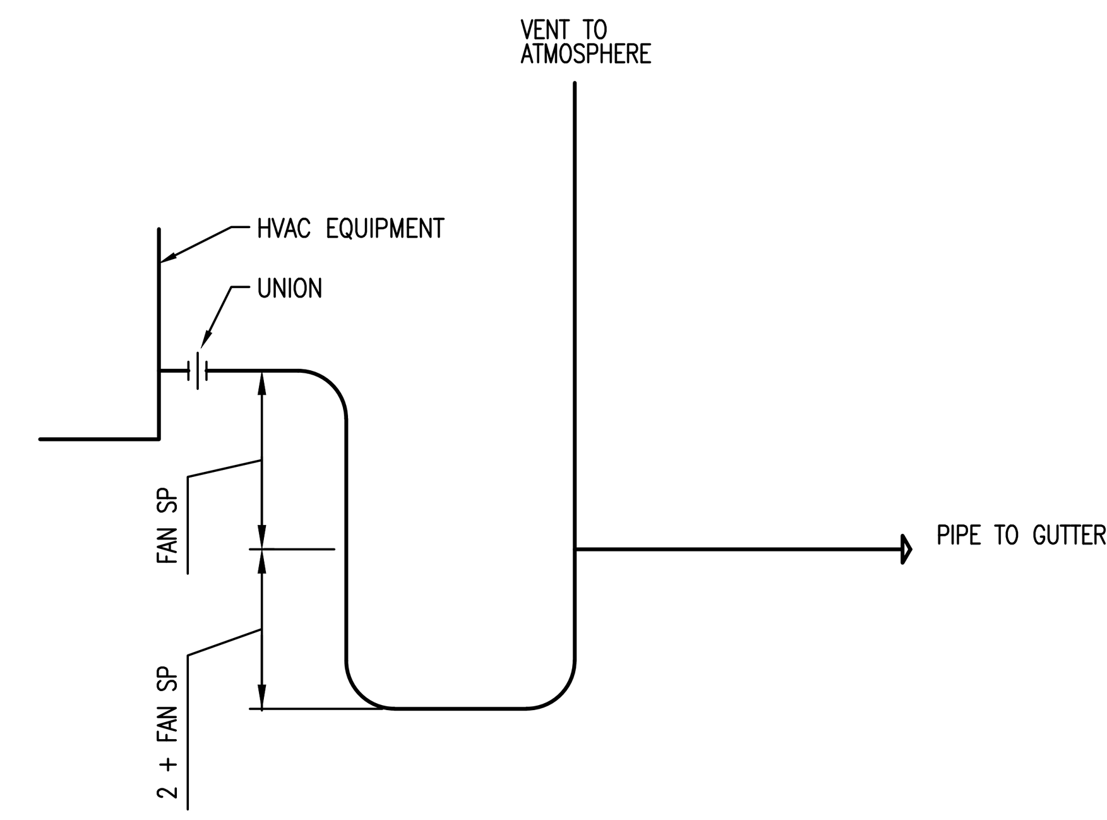
DATE: 10.06.2022

SHEET NO.

MP103



3 RTU FRAMING PLAN
SCALE: NTS



2 CONDENSATE TRAP DIAGRAM
Scale: NTS
BLOW THROUGH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

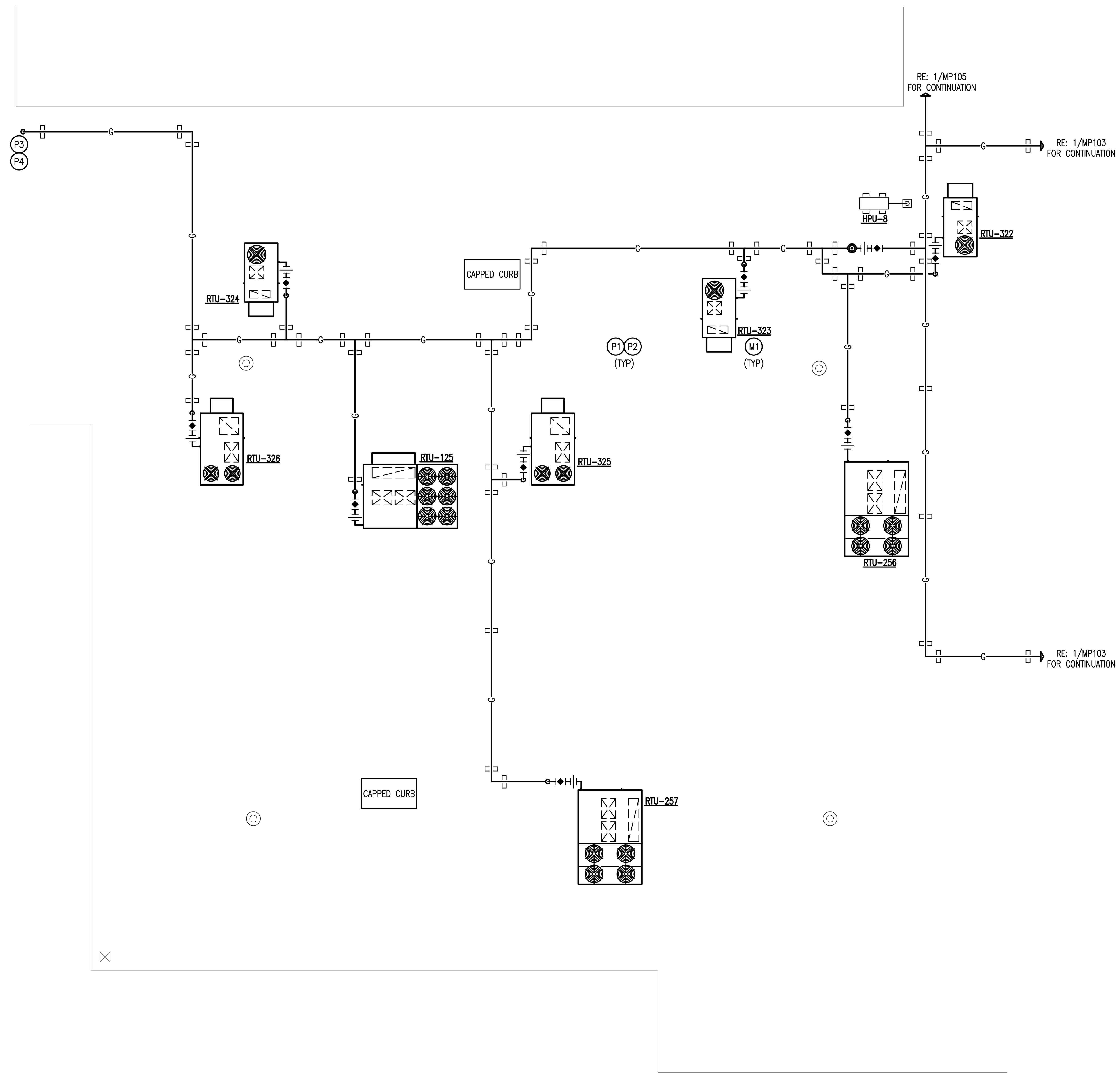
P2. INSTALL NEW GAS SERVICE PIPING FOR ALL NEW ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

P4. DROP DOWN EXTERIOR WALL TO GROUND MOUNTED ROOF TOP UNITS.
RE: MP105 FOR CONTINUATION.

CONDENSATE PIPE RUN OUT SCHEDULE

AGGREGATE TONS	SCH 40 PIPE SIZE
0 - 2	3/4"
2 - 5	1"
5 - 30	1-1/4"
30 - 50	1-1/2"
50 - 165	2"
165 - 300	3"



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN
Scale: 1/8" = 1'-0"
NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
MECHANICAL-ELECTRICAL-PLUMBING-CONSULTANTS
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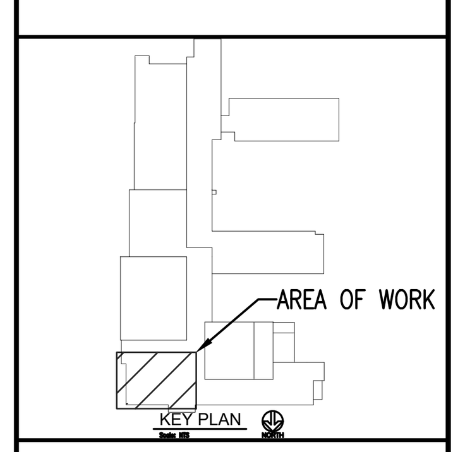


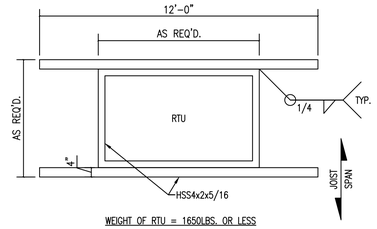
PROJECT TITLE
NATHAN HALE HIGH SCHOOL RFP

REVISION

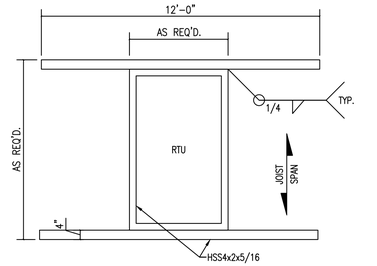
SHEET TITLE
PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

DATE: 10.06.2022

SHEET NO.
MP104



WEIGHT OF RTU = 1650LBS. OR LESS



WEIGHT OF RTU = 1650LBS. OR LESS

2 RTU FRAMING PLAN

SCALE: NTS

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1–1/4"
30 – 50	1–1/2"
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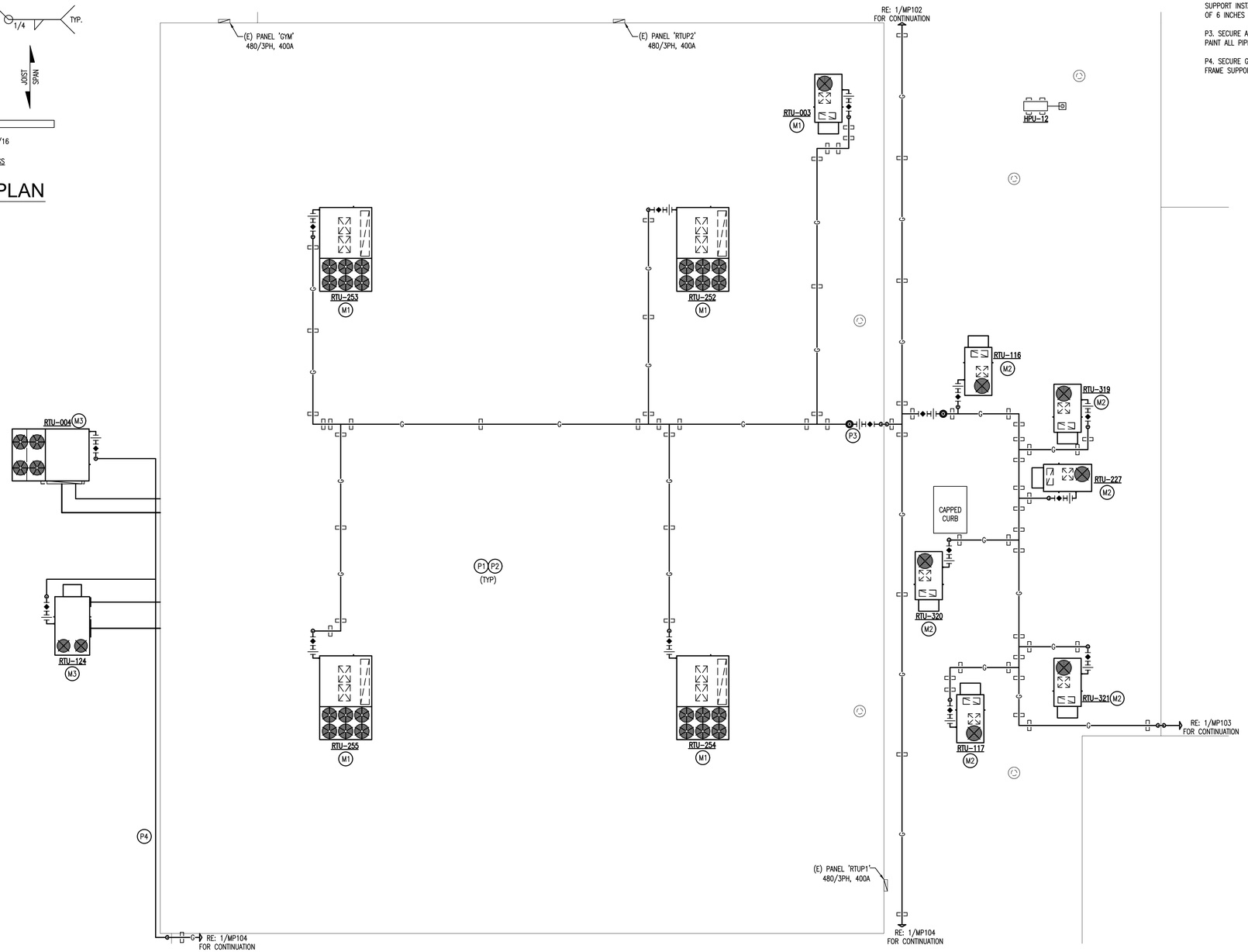

1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

Scale: 1/8" = 1'-0"

NORTH

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW RTU ON EXISTING CURB. PROVIDE CURB ADAPTOR IF REQUIRED. CONTRACTOR SHALL VERIFY IF CURB ADAPTOR IS REQUIRED PRIOR TO BID. COORDINATE WITH TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ANY ADDITIONAL CONTROLS.

M2. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

M3. INSTALL UNITS ON GROUND. RE: M101

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER OR ROOF DRAIN AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

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P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL PIPE AND SUPPORTS TO MATCH WALL FINISH.

P4. SECURE GAS PIPE TO WALL. ROUTE GAS PIPE FROM WALL TO UNIT SECURED TO DUCT FRAME SUPPORTS.

TULSA PUBLIC SCHOOLS

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ENGINEER SEAL

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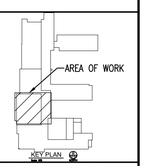

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

DATE: 10.06.2022

SHEET NO.

MP105

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"

MECHANICAL KEYNOTES:(MX)

M1. INSTALL NEW RTU ON EXISTING CURB. PROVIDE CURB ADAPTOR IF REQUIRED. CONTRACTOR SHALL VERIFY IF CURB ADAPTOR IS REQUIRED PRIOR TO BID. COORDINATE WITH TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ANY ADDITIONAL CONTROLS.

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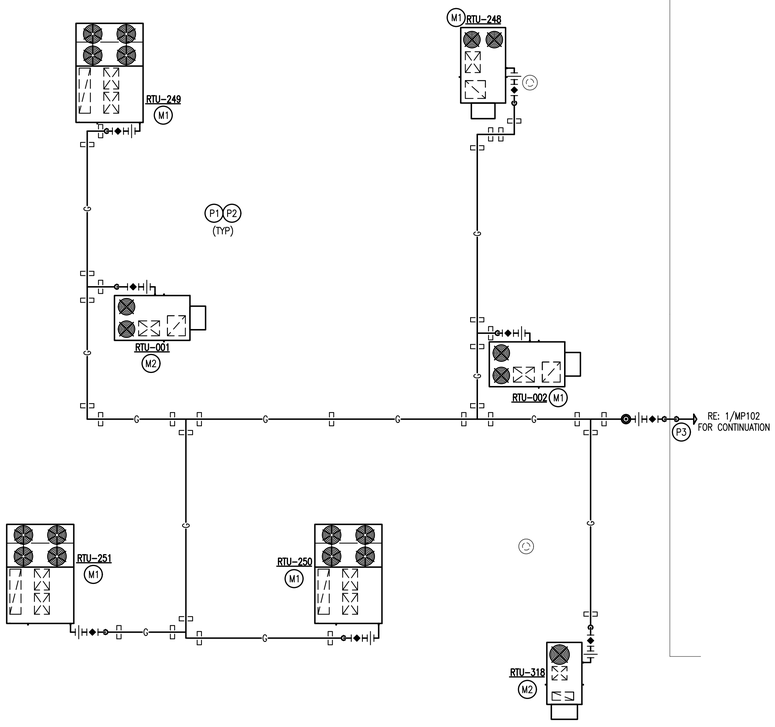
PLUMBING KEYNOTES:(PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

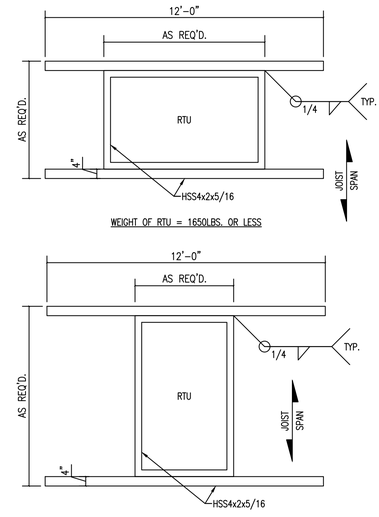
P2. INSTALL NEW GAS SERVICE PIPING FOR ALL NEW ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN
Scale: 1/8" = 1'-0"

NORTH



2 RTU FRAMING PLAN
SCALE: NTS

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
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CA 3419 EXP: 06/30/2024

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REGISTERED PROFESSIONAL ENGINEER
GAYLE D. GWINUP
15478
OKLAHOMA
10/4/2022

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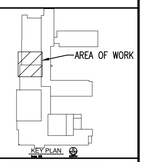
NATHAN HALE HIGH SCHOOL
6960 E 21st ST
TULSA, OK 74129



PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

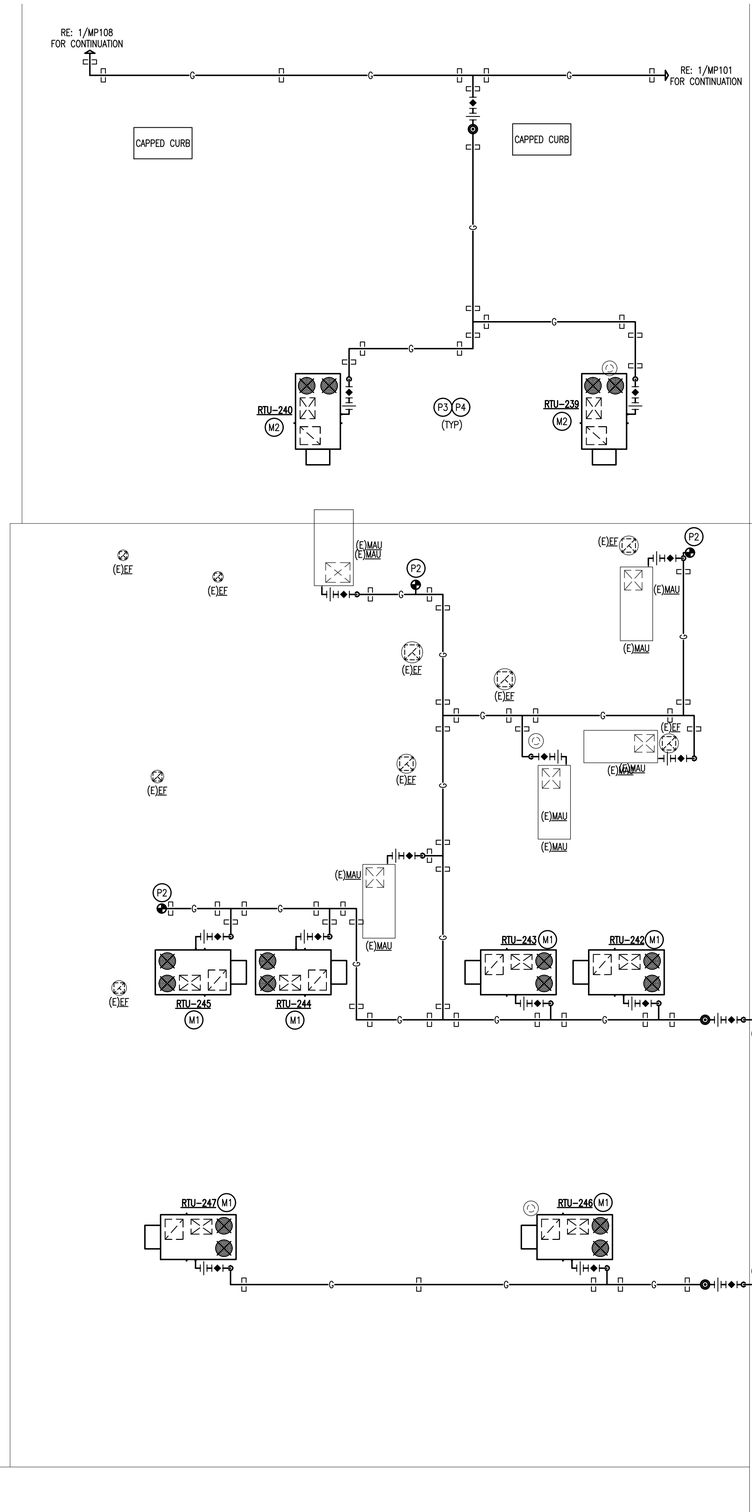
SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

DATE: 10.06.2022

SHEET NO.

MP106



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN
Scale: 1/8" = 1'-0"

NORTH

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1-1/4"
30 – 50	1-1/2"
50 – 165	2"
165 – 300	3"

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW RTU ON EXISTING CURB. PROVIDE CURB ADAPTOR IF REQUIRED. CONTRACTOR SHALL VERIFY IF CURB ADAPTOR IS REQUIRED PRIOR TO BID. COORDINATE WITH TPS CONTROLS CONTRACTOR FOR INSTALLATION OF ANY ADDITIONAL CONTROLS.

M2. INSTALL NEW ROOF TOP UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

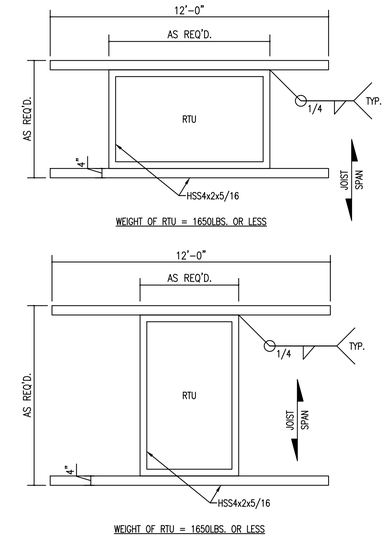
PLUMBING KEYNOTES: (PX)

P1. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI-STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

P2. RECONNECT EXISTING GAS PIPING TO EXISTING MAKE UP AIR UNIT OR DROP THROUGH ROOF. PROVIDE NEW UNIONS, DIRT LEG AND SHUT-OFF VALVE. VALVE SHALL BE FULL SIZE OF EXISTING RUNNOUT GAS PIPING.

P3. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

P4. INSTALL NEW GAS SERVICE PIPING FOR ALL NEW ROOF TOP UNITS. ALL NEW GAS PIPING SHALL BE PAINTED YELLOW. INSTALL UNION, SHUT-OFF VALVE AND DIRT LEG AT ALL POINTS OF CONNECTION. INSTALL TREATED LUMBER AND STRAPPING FOR PIPE SUPPORT INSTALL TREAD MAT AT ALL SUPPORTS. TREAD MAT SHALL EXTEND A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.



2 RTU FRAMING PLAN
SCALE: NTS

TULSA PUBLIC SCHOOLS

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CA 3419 EXP: 06/30/2024

ENGINEER SEAL

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

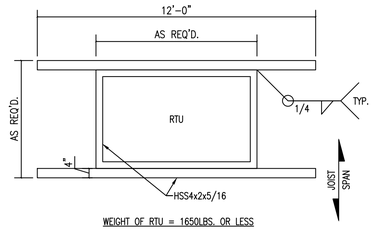
SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

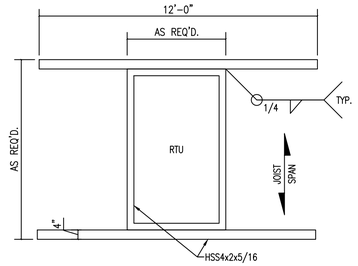
DATE: 10.06.2022

SHEET NO.

MP107



WEIGHT OF RTU = 1650LBS. OR LESS



WEIGHT OF RTU = 1650LBS. OR LESS

2 RTU FRAMING PLAN

Scale: NTS

CONDENSATE PIPE RUN OUT SCHEDULE	
AGGREGATE TONS	SCH 40 PIPE SIZE
0 – 2	3/4"
2 – 5	1"
5 – 30	1–1/4"
30 – 50	1–1/2"
50 – 165	2"
165 – 300	3"

MECHANICAL KEYNOTES: (MX)

M1. INSTALL NEW ROOF TOP UNIT AND MAKE UP AIR UNIT AT THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION OF ROOF TOP UNIT WITH BUILDING STRUCTURE. VERIFY FINAL LOCATION IS NO CLOSER THAN 10 FEET TO EDGE OF BUILDING AND NO VTR OR BUILDING EXHAUST IS WITHIN 10 FEET OF UNIT OUTDOOR AIR INTAKE. RELOCATE EXISTING VTR'S THAT ARE FOUND TO BE WITHIN 10 FEET OF OUTDOOR AIR INTAKE. MODIFY GAS SERVICE OR ELECTRICAL CONDUITS AS NEEDED FOR FINAL LOCATION.

M2. INSTALL COOK LINE EXHAUST FANS ON VENTED ROOF CURB IN COMPLIANCE WITH NFPA. INSTALL FANS A MINIMUM OF 10 FEET FROM EDGE OF BUILDING.

PLUMBING KEYNOTES: (PX)

P1. INSTALL NEW CONDENSATE PIPING AND TRAP. ALL CONDENSATE PIPING SHALL BE GALVANIZED. ROUTE CONDENSATE PIPE TO NEAREST GUTTER AND TURN DOWN. PROVIDE TREATED LUMBER SUPPORTS FOR CONDENSATE PIPING. PROVIDE TREAD MAT FOR SUPPORTS. EXTEND TREAD MAT A MINIMUM OF 6 INCHES IN ALL DIRECTIONS OF SUPPORTS.

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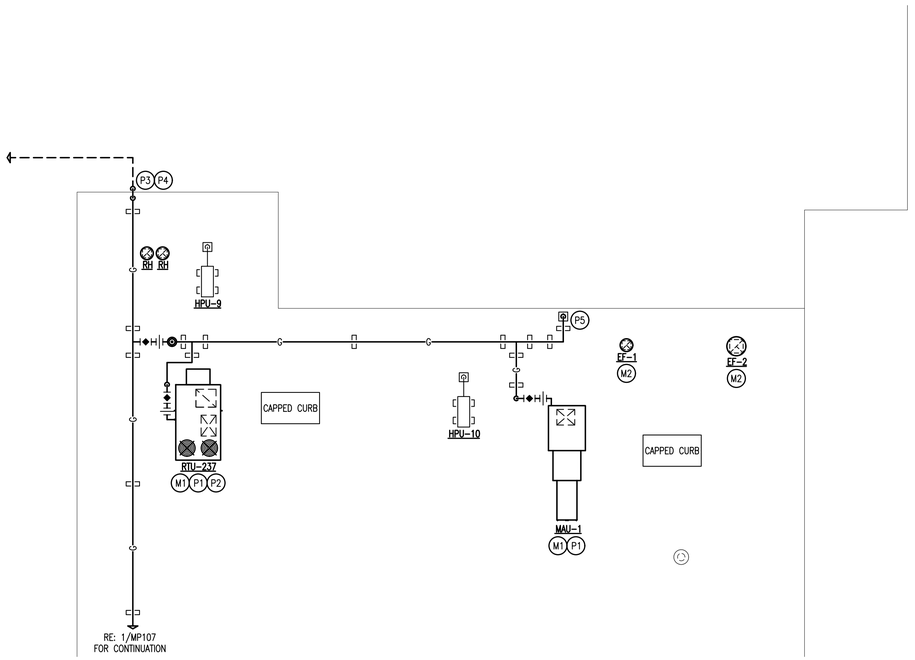
P3. SECURE ALL PIPING IN VERTICAL DROPS TO WALL WITH UNI–STRUT AND PIPE CLAMPS. PAINT ALL SUPPORTS TO MATCH WALL FINISH.

P4. DROP DOWN EXTERIOR WALL AND EXTEND TO METER. INSTALL HEADER AT METER FOR NEW PIPING. INSTALL SHUT–OFF VALVE AT HEADER FOR EACH BRANCH. CONTRACTOR SHALL EXTEND GAS PIPING APPROXIMATELY 220 FEET TO THE EAST AND CONNECT TO EXISTING METER APPROXIMATELY 900 FEET TO THE NORTH. PLUMBING CONTRACTOR SHALL COORDINATE NEW SERVICE DEMAND AND PRESSURE WITH SERVICE PROVIDER. FINAL ROUTING OF GAS SERVICE LINE SHALL BE COORDINATED WITH LOCATION OF PROPOSED SOCCER COMPLEX.

P5. GAS SERVICE DOWN TO COOK LINE. PENETRATE THROUGH ROOF WITH HOODED ROOF CURB OR OTHER APPROVED METHOD BY ROOFING MANUFACTURER SO AS NOT TO VOID ROOF WARRANTY.



1 PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

Scale: 1/8" = 1'–0"

NORTH

TULSA PUBLIC SCHOOLS

ALLIED ENGINEERING GROUP, LLC
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EXP. 06/30/2024

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REGISTERED PROFESSIONAL ENGINEER
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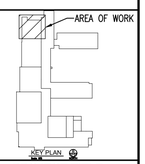

PROJECT TITLE

NATHAN HALE HIGH SCHOOL RFP

REVISION

SHEET TITLE

PARTIAL MECHANICAL AND PLUMBING ROOF PLAN

DATE: 10.06.2022

SHEET NO.

MP108